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In stained glass that seems made of melted jewels Mr Waring gives us some very precious specimens from Lucca and Florence: burning blues, the reds of fiery martyr-robes, gold of the sun's own dye, green like the Swiss lake water or a glassy soda-water bottle, which is of a marvellous colour, lace-work of banded flowers, amaranth and violet, forget-me-not and everlasting chesnut browns, dear to Italian eyes, and the tone of a Titian's satyr skin. Such are the hues he dazzles our cold blue northern eyes with in his long triumphal procession of armed saints and hard-foreheaded preachers. Arches of lapis-lazuli, crescents of perpetual flowers, bow over the upward-turned brows of ecstatic Pauls and Peters; praying kings and suppliant servants of God shine in the robes of the blessed, and appear to us as in a luminous vision, in such chromatic harmonies that they come to us as in clouds of music or in strains of angel quiring. The welded glass shows like the Urim and Thummim of the High Priest, and seems in more glorious instances radiant with the very Shekinah itself. Mr. Waring's description of the Italian-Gothic style of mural decoration begun by Giunta da Pisa, and followed up by Cimabue, Giotto, Memmi, Gaddi and Aretino, is a favourable specimen of his curt, simple, clear, accurate manner of Art-description.

From the frescoes, Mr Waring descends to the ingenious wood-inlaying mentioned by Theophilus in his twelfth century treatise, but first found now in Venetian ivory and wood boxes of two centuries later. Doors, presses and sacristy seats were adorned in this way by means of a limited palette of dark and light woods used in veneers. Fra Giovanni, of Verona, in the sixteenth century, carried this art miles further, using slips of polished willow for his high lights, and artificially dyeing his other woods with strong waters, coloured infusions and dark penetrating soaking oils. The Dominican monk, Fra Damiano, of Bergamo, excelled even this man, burning in his shadows, and, with inlaid wood, using such fine carpentry that no one's eye could detect the joint. This crafty monk produced landscapes and figures which France and Flanders afterwards improved, but finally let die. But lately the art has been revived for mere trade furniture. The light yellow figures in these examples contrast well with the low red-toned ground, and remind us of the pretty plaiding of Tunbridge ware.

In marble inlay Italy also is very rich, with its white lace-work on coal-black grounds, its signs of the zodiac, wheels of fortune, and flaunting heraldic emblems, its red and black roundels and lozenging and general geometric puzzle-work, where order looks harmoniously thrown into pleasing confusion. Rome, Ravenna, Lucca, are all full of specimens, and on the fascade of the Pisa Duomo it is used with a zebra effect on large surfaces of wall. The early pavements of Siena have the figures cut in outlines, filled in with mastic, the ground is white, and the grey marble inlaid stands for shadows. They look like designs for huge brasses. In the Florence Campanile the tower becomes a mere show-card of geometric patterns, so redundant and beautifully overdone is it. In pavements it soon got worn out, but it is admirably fitted for monumental slabs within rails or on walls, and sometimes for the rarer spots in external wall surface, as round an arch or over a door. In one beautiful instance, in the Baptistry pavement in Florence, there is a great zodiacal circle of this inlay originally marked with incised lines. A double row of arches and columns radiate from the centre, the basis of the outer columns resting on the centre of the arches of the innermost circle, the whole being filled in with foliated ornament, in which are inserted the twelve zodiacal signs, and said to have been once part of a sun-dial.

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HANDBOOK

OF

SPECIFICATIONS:

OR,

PRACTICAL GUIDE

TO THE

Architect, Engineer, Surveyor, and Builder,

IN DRAWING UP

SPECIFICATIONS AND CONTRACTS FOR WORKS AND CONSTRUCTIONS.

Illustrated by Precedents of Buildings

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Preceded by a Preliminary Essay,

FORMS OF SPECIFICATIONS AND CONTRACTS, &c. &c.

And Explained by numerous Illustrations.

BY

T. L. DONALDSON, PH.D., ARCHITECT,

PROFESSOR OF ARCHITECTURE AND CONSTRUCTION, UNIVERSITY COLL., LONDON, M.I.B.A.;
CORRESPONDENT OF THE INSTITUTE OF FRANCE,
MEMBER OF VARIOUS EUROPEAN ACADEMIES OF FINE ARTS.

WITH A REVIEW OF THE LAW OF CONTRACTS,
AND OF
THE RESPONSIBILITIES OF ARCHITECTS, ENGINEERS, AND BUILDERS,

BY W. CUNNINGHAM GLEN,

OF THE MIDDLE TEMPLE, BARRISTER-AT-LAW; AUTHOR OF VARIOUS LEGAL WORKS.

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TO

SIR CHARLES BARRY,

ARCHITECT, R.A., M.I.B.A.

IN ADMIRATION AND RESPECT

FOR HIS EMINENT TALENTS AS AN ARTIST,

HIS ATTAINMENTS AS A MAN OF SCIENCE,

AND AS A MARK OF PERSONAL FRIENDSHIP,

THIS WORK

Is Inscribed

BY THE AUTHOR.

INTRODUCTORY ADDRESS.

THE volume of Specifications by the late Alfred Bartholomew being out of print, and a work of the same nature being generally demanded, it was at first conceived, that a reprint of that useful work, with modifications and additions, would supply the desideratum. But the state of science connected with construction has made large advances. Vast experience has been brought into play by the great engineering and architectural works, which have been carried out during the last twenty years; a period rich in important improvements introduced by men of extraordinary capacity, skill, and experience, who have been engaged in operations of the first magnitude. It was felt also, that the preliminary matter of Bartholomew's specifications is now out of date; that the errors of taste and construction therein alluded to are confined to the inferior practitioner; and such a revolution has been effected in various operations, that the professional man required a work more in accordance with the improvements of the age and the actual state of construction at the present time.

The general employment of concrete—the enlarged introduction of iron—the use of glass—the more skilful combinations of timber construction and scaffolding, and in fact all the operations of the builder, deserve greater variety of description.

The Author being anxious to illustrate the practice of various Architects, addressed himself to his professional brethren, and his appeal has met with a response at once generous, cordial, and frank. If a name or two among the most eminent do not appear, it is not his fault, and the absence of such arises from a reserve, which it would ill become him to question. As it is instructive to note the variety of practice, which occurs in England, Ireland, Scotland, and even France, specimens of each country are introduced. Nor has it been considered expedient to confine the precedents merely to the last twenty years. Some of even longer standing for works of established authority have been introduced, thus connecting the practice of the present period with the one preceding.

It has been thought desirable to combine the most useful precedents in such a work as this, so that the professional man may not have to refer to a variety of documents, many of which are now out of print. Such are those most valuable contracts and specifications connected with the erection of the Houses of Parliament, which appear in the returns of the House of Commons, and which are introduced in this Work with the concurrence of its eminent Architect. It is regretted that the abundance of other matter did not allow the introduction of the schedules of prices for works issued by the Commissioners of Public Buildings, drawn up by Crown officers of the first ability and of unquestionable authority, as connected with first-class buildings, the results of many decades of years of experience and practice.

The legal bearing of the covenants in contracts, and the responsibilities of Architects, Engineers, and Builders are most important considerations, not to be neglected. The Author has therefore availed himself of the invaluable assistance of his able and learned friend, William Cunningham Glen, Esq., whose legal works are of high authority and held in great estimation, to supply this portion of the work. He feels assured that the chapters on these important topics will be most acceptable, from the cases enumerated, the judgments recorded, and the masterly exposition by which they are accompanied, brought down to the very date of publication.

The mode of estimating the probable cost of buildings by cubical measurement is not disregarded. The system of competition for designs, both as regards the program of instructions and the mode of selection, has not passed unnoticed.

The Author therefore trusts, that he has brought together a mass of professional practical matter highly useful to the Architect, the Engineer, the Surveyor and Contractor; founded on the highest authorities, and carried out in actual execution, and therefore on all accounts deserving every consideration and commanding unreserved confidence.

THOMAS L. DONALDSON.

BOLTON GARDENS, RUSSELL SQUARE,
December, 1859.

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ON THE

PRINCIPLES WHICH GUIDE THE DRAWING UP OF A SPECIFICATION,

AND ON

THE SYSTEM TO BE FOLLOWED.

THE construction of a specification is very simple. It will generally be found, that a great portion of the same particulars exist in all contracts, unless modified by some special local circumstances, or influenced by some peculiarity as to the class and destination of the edifice.

The contract for the execution of a building consists of three parts, or divisions, distinct in themselves, and relating to distinct operations.

1st. The *legal obligations* of the employer and employed.

2nd. The *drawings* showing the design and structural disposition of all the parts.

3rd. The *specification* or description of the execution as to materials and workmanship, attached to which is the *schedule of prices* for works, which in the body of the contract may be agreed to be paid by measure and value as extras, or for ascertaining the value of any omissions in the works specified.

The *first or legal part* contains the obligations of the Builder to execute the works in the soundest and most workmanlike manner; to provide all materials, matters, and things of the best quality, agreeably to the plans, drawings, and specification, or which may be implied therefrom, and according to such further instructions, drawings, &c., as may be furnished, and to the satisfaction of the Architect; to make good all defects, cracks, or other damage, arising during the progress of the works or in consequence thereof, with the guarantee, in some cases, for the soundness of the work for a stated period; and any damage to the adjoining premises is an usual contingency to be provided against. Consequently these items need not appear in the body of the specification, and, as they refer to all the trades, prevent its being encumbered by useless repetitions.

All the *drawings* should be to the scales of aliquot parts of the inch to the foot, as the tenth, eighth, quarter, half-inch, or inch scale, the latter being reserved rather for the detail drawings. All cornices and profiles, and portions of the ornamental work, should be drawn to the full size, or at least the half or quarter full size.

To avoid unnecessary matter in the specifications, it is best to have all possible dimensions and directions noted fully on the drawings, so as to reserve the specification, as much as possible, merely for the description of the materials and the nature of the work; and this will very much assist the Clerk of the Works and the Foremen in carrying out all the operations.

The Architect should have two sets of the specification and drawings; the one of those signed, and forming part of the contract and numbered, to retain in his office; the other, which may be tracings, to be on the building, in the possession of the Clerk of the Works, and accessible to the Contractor for verification from time to time. And he is entitled to require by the contract, that the Builder should make at his own cost the copy, which he will want for his own use.

The *specification* relates merely to the materials used and mode of executing the works. It is not to be supposed, that a person can form from a specification an adequate idea or judgment of the technical nature of the construction of a building in the conception of the disposition of the masses. The structural disposition of the masses is explained in the drawings alone.

It will be seen that in some of the trades—as the Bricklayer or Mason, Carpenter, Plasterer, Painter, and others—the clauses are almost identical in various specifications, as to the matter, but varied in the form. It has been thought best still to retain them at full, as much of the characteristic practice of the Architect, and his tone of mind are evidenced by the manner in which he writes his description. The labor of reference to other specifications is also thereby avoided, and the reader sees at once the more or less complete manner in which the Architect may have treated his subject.

Much of the fulness, or general nature of the description of works, depends materially upon the character of the tradesman employed. Where Builders of high established character undertake a work, great minuteness of description may not be necessary;

but the Architect cannot be too elaborate or cautious, when having to do with a stranger or person of doubtful reputation, as sometimes happens in the case of open competition for public bodies. These boards are less cautious as to the character of the Contractor than anxious to secure the lowest amount; trusting to remedy any defect by the stringency of the contract and elaboration of the specification; forgetful that, even with these precautions, a wide door is still left open for fraud and bad work by unscrupulous men.

The work may be divided into two general heads, viz. :—Carcase and Finishings.

The trades, therefore, may be classed accordingly; and it generally happens that the contract for the carcase, as in the Houses of Parliament, is first entered into and executed; and another, or others, subsequently made for the completion and finishing with a separate party or parties.

Carcase
- Excavator or Digger.
- Bricklayer.
- Mason.
- Slater.
- Founder and Smith.
- Carpenter.

Finishing
- Joiner.
- Plasterer.
- Plumber.
- Painter.
- Glazier.
- Paperhanger.
- Ironmonger.
- Smith & Bellhanger.
- Gasfitter.

This classification is so simple and natural, that specifications generally follow this arrangement, and we shall consider each trade separately.

Skeleton Specification.

THE EXCAVATOR OR DIGGER.

To excavate the site of the ground and the several trenches for footings of walls and drains; to provide and throw in the concrete, if any be used; and here, of course, the mixture of the concrete should be specified, and the proportions of the materials composing it, how to be mixed up, and the scaffold and platforms, with the height from which it is to be thrown. Trenches to be kept free from water.

Road of approach to works to be formed, if necessary.

Fill in again, level, and cart away superfluous earth.

We now approach the mechanical trades. It is necessary, therefore, to advert to the general order of the matter in each trade.

1st. The materials.

2ndly. The work; proceeding to the several parts of the building, commencing with the most important, down to the individual portions or items. In Carpentry it is usual to begin with the roof; in Brickwork the foundations are the first portion particularized.

3rdly. At the close of each trade, conclude generally with the *provisions* for that particular trade.

4thly. The assistance to be given to the other trades.

5thly. Leaving all perfect and complete at the conclusion.

BRICKLAYER.

The *materials*. *Bricks*. The *mortar*—its component parts. Lime and sand—their proportions, and how mixed, in a pugmill or on a hard platform. The *cement*, and proportion of sand therewith.

The *work*—whether old English or Flemish bond; height of 4 courses. Face of wall—whether to be finished fair and have flat joint and jointed, or joints struck, or tuck-pointed, or in blue mortar, or joints left for cement or plastering. Joints flushed well in, and beds level throughout.

The footings to run quite through. Cement courses, with slates, or flags, or asphalte, to prevent damp. Iron-hooping bond-courses in cement—how many to each floor, or at any specified heights. Arches over openings. Chimney-breasts and shafts, and how finished. One or two uppermost courses of all walls had better be set in cement, to prevent damp or wet getting in from the top. Cellars. Areas. Fence-walls.

Then as to drains. Cesspools. Traps. Wells. Copper. Oven. Brick paving. Provision of so many rods of brickwork in mortar.

MASON.

Materials.—Description of the various sorts of stone to be employed; whence derived, and the quarry, if any specific one, and special quality or bed—free from all defects, laid in the natural bed.

Work.—Whether fair work in straight courses; Kentish rag;

rough nobling; through bond stones; quoin stones; heights and sizes of courses.

Facework.—Whether solid or ashlar; thickness; heights of courses; how the vertical joints are to come; bond stones; how to be finished off; enrichments. Cramps. Plugs. Dowels; of what materials and sizes; how run—in lead, cement, or sulphur. Profiles. Moulds. Models. Rebates. Grooves. Throatings. Channelings. Put lead on the weather surface, or top of all cornices, let into the joints of bed above.

Sills. Steps. Paving. Curbs. Copings. Shelves. Chimney pieces—of what material—marble, stone, or slate; and of what value respectively. Cost price, and fixed complete.

Cut holes for Carpenters, Smiths, &c.

Provision of so many feet of cube stone, of various qualities. Superficial feet of paving. Labor and a sum for carving.

Clean off the whole of the work prior to final completion.

Assist the other trades when and where required.

Leave all perfect at the conclusion of the job.

N.B.—If there should be any carving to be executed by another party, care should be taken to specify, that all requisite scaffolding should be left for the use of Sculptors. The carving is usually reserved, and a fixed sum stated for that object.

If any *marble decorations* be employed, they must of course be described, or a *sum* provided.

SLATER.

Materials.—*Roofs.*—Descriptions and qualities of slates to be used upon the several roofs, if more than to one building; and of what color; if of fancy arrangement.

Work laid to what gauge; with 2 or 3-inch laps; fastened with copper or zinc nails, 2 to each slate. State if to be laid in any peculiar pattern, double courses under eaves and next the walls. Slate ridges, crested. Then proceed to notice any other general matter on the building—as the flats, or any floors, if covered with slabs. Upright enclosures. Cisterns. Sinks. Shelving.

N.B.—All shelving in basement and offices should generally be of slate. Chimney-pieces. Steps, paving.

Bins in wine-cellars may be formed of brick or slate upright divisions, with tiers of shelving of $\frac{3}{4}$-inch or inch rough shelving, edges rubbed.

FOUNDER AND SMITH.

To provide all models and moulds; those for the ornamental work from the design of the Architect, to be delivered up to him at the end of the job; and no second casting to be retained by the Founder or Contractor.

Materials.—All the *cast-iron* to be of the best soft grey metal. Cast perfectly clean. All castings to be proved to the weights described on the drawings. To be painted one coat before leaving foundry.

Tenons and caulkings at the ends of girders; holes left.

Provide bolts, and nuts, and washers.

Wrought-iron in beams or girders; if box girders, they should be specifically mentioned and the drawings given, which should be prepared by a duly qualified practical Engineer.

Describe the *columns*, caps, and bases. Stacks of rain-water pipes, of stated diameter, with heads, having waste-shoots; joints to be put together, and rendered impervious to air or wet, with oakum and red lead; shoes down into the drains. Cast-iron ornamental gratings for ventilation, of fixed sizes. Bell traps for drains. Cast-iron hoppers or chimney bars to openings of fireplaces. Ring for smoke-jack. Provide the Bricklayer with all iron hooping for bond courses. Provide the Carpenter with all wrought-iron rods, straps, heads, bolts, nuts, screws, shoes for ends of timber and other ironwork. Provide all wrought or cast-iron beams and girders, as specified on drawings. All wrought or cast-iron sashes or frames, and skylights, of copper if so required, rails to staircases and outside railings, or balconies, of patterns or at stated prices per foot run.

Provision of so many tons of cast iron in girders, columns, &c., and so much of wrought iron in girders, straps, bolts, &c.

N.B.—It is desirable that there should be one or more sheets of drawings, showing the size, form and parts of each different sized girder used in the building, with full dimensions noted on each.

CARPENTER.

Hoards. Shoring. Gangways in streets.

Materials. Fir timber to be best Baltic, from Dantzic, *Riga*, *Memel*, free from sap, large or loose knots, and shakes; perfectly dry. *Oak*, English, free from all defects.

General Particulars.—To provide all scaffolding and discharging pieces, plates, filletings, centrings, turning-pieces, lintels, backings, battenings, bracketings, cradlings, quarterings, firrings, bearers, bond, wood-bricks, moulds, rods, levels, and whatever else may be necessary for the due execution and completion of the works.

Work.—State, if necessary, when and where any particular portion of the framing may have to be prepared. No rafters, joists, or quarters to be more than 12 inches apart.

Roof.—Principals, how many: as to ironwork of do. No scantlings will here be necessary, if they be fully given on the sections and other drawings; but give general directions, as to the mode in which they are to be put together. Gutters. Parallel or framed, with a fall and drips. Describe flats.

Floors.—How framed, in one or more thicknesses. Single joists; single or double framed; dowelled. Trussed girders. Strutting. Brestsummers. Trimmers. Joists to be pinned and caulked down; some of continuous lengths from outside wall to outside wall to act as tie. Trimmers. Quarters. Partitions trussed.

Provision.—So many feet cube of *fir* framed, and so many of *oak.*

Attend to all the other trades, when and where required; leave all perfect at conclusion of job.

JOINER.

Materials.—Deals and battens, where from; clean, free from sap, knots, and shakes, well seasoned.

State if any portion of the framing should be commenced immediately, prepared and put together without wedging, and kept in a dry place (so many) months before fixing.

Flooring.—Generally; whether of deals or battens, of what thickness, how laid; folding, splayed headings, edge nailed, ploughed and tongued, if with iron hooping; dowelled; borders, or parquetry; margins to slabs.

Skirtings.—Grounds to ditto, and state whether the skirtings are to be square, torus, or moulded; rebated and backed plinth; joints feather tongued, heights of ditto to several floors or rooms; landings, passages, and closets.

Doorways and Doors.—Thicknesses. If Gothic or circular headed, how many panels, square, bead, butt, or moulded; raised panels, hung with what hinges, locks, bolts, and other fastenings. If any are to be glazed. In dark situations in London and elsewhere, it is usual to have the upper panels of doors filled in with ground or rough plate glass in the basement or obscure passages, so as to gain light; and even to have as much of the partitions as possible glazed in such situations, thus giving a cheerful aspect to what would otherwise be a sombre position. Outer glazed doors should be provided with shutters, either movable, or what is better, hung as a flap to the door, or to the frame.

Frames.—Solid, beaded and moulded, with oak sills, if external; jambs and linings, sunk, rebated and beaded; grounds, and moulded architraves; state girth in inches.

Folding-doors.—Material, thickness, how many leaves, and panels high; how hung, lock, bolts, furniture.

N.B.—They seldom act satisfactorily, if made to slide, however ingenious the precautions.

Window Sashes.—The material, deal, wainscot, or mahogany; thickness of sashes; nature of moulding, whether casements, common or French; and single or double hung sashes, iron or brass axle pulleys, lines, weights of iron or lead, and fastenings.

N.B.—It is to be observed that in the case of casements in the best rooms, it is desirable to have the styles, and particularly the meeting ones, as light as possible; consequently it is necessary to employ mahogany or wainscot, as being more rigid, as also when sheets of large plate glass are used.

Frames.—Material, fir, wainscot, or mahogany; oak sill to outside windows, double sunk; if with metal or slate tongue, let into stone sill. State, if fancy headed. Solid or boxed, of wainscot or mahogany, pulley pieces, and beads; and describe the backs, elbows, and soffits. Back linings (if not already prepared with plaster and cement) of the boxings; shutters; and back flaps, how hung; architraves, knobs to shutters, and occasionally springs to keep them close in the boxings.

N.B.—It may be remarked, that it is desirable to carry up the shutters only to within 6 or 9 inches of the top of the sashes, to allow of any internal fittings for blinds, so as not to interfere, when drawn up, with the closing of the shutters.

To *shop fronts* provision will be made for revolving shutters, which must be particularly specified, and the sashes will of course be described, so as to enable the tradesman to understand all the details of the design, material and workmanship, straight, circular, or splayed, and profile of bars—metal ones being frequently employed.

Staircases are generally of two sorts in the first-class houses, the principal and secondary, or servants' staircases; or if there be only one, it is described according to the class of the building or dwelling with the following particulars :—

Material.—The carriage, steps and risers, moulded nosings, strings, housings, soffits, profiled ends of steps, winders, circular ones at bottom of flights.

Handrail.—Material, choice Spanish mahogany, wainscot, or deal or American birch ; the profile, which had better be drawn, whether solid or veneered, fixed with iron cores to the rails, and with proper twists, ramps and curtailed end ; state if latter is to be carved. French polished. Balusters, if any of peculiar form, square or turned, and if all or any are to be of iron. Newels, if of metal, to be specified in the trade of Smith and Founder. Wainscoting with plinth, capping, or mouldings under ceiling.

Framed Partitions, enclosures to closets, how many panels high, if square, bead, butt, or moulded ; if with glazed panels ; describe doors to ditto, and dressings, if in one or two heights of doors.

Cupboards.—Describe how to be fitted up. All the shelves had better be loose, resting on slips, so as to be able to be taken out, to enable the closets to be cleaned with greater facility.

Water Closets.—Describe the material and thickness of the seat, riser, flap, frame and skirting, which had better be so arranged that the seat may easily be drawn out, and the front opened to admit of access to the apparatus for cleaning and repair. Candle shelf and paper box, either sunk in the frame or attached to the partition or wall.

Cisterns.—Describe sizes and thicknesses of material, dovetailed angles.

Kitchen Fittings.—As dresser with sunk shelves, top 1½ inch or 2 inches thick, drawers, foot board, bearers, and cut brackets. Locks and knobs to drawers, plate rack, closets, dust bin.

Allowance of so many feet super of flooring, so many feet super of shelving, 6, 9, and 12 inches wide, on brackets or slips.

PLASTERER.

Materials.—Describe laths, as heart of oak or fir, free from sap ; whether single lath, and half, or double laths ; wrought nails.

Require that the *putty* should be made up months before applied, in order to get the lime thoroughly quenched ; the *hair* to be fresh, of the best quality, sound, and not rotted.

Plaster or render 1 coat rough on brickwork, or with 2 coats and flote, set, or as the case may be.

Bastard or trowelled stucco on brick.

Lath plaster 1 or 2 coats, flote and set.

The *cornices,* whether plain or enriched, are to be stated by the girth of the profile, and the enriched mouldings stated by the number.

Cast flowers, or ornaments on the faces of the walls or ceilings, are to be specifically named.

Keen's Cement or Parian.—With regard to the material, which goes under this name, it is now very largely introduced and most effectual, becoming rapidly very hard in setting, capable of being followed on by painting in a short time, and as castings of capitals, and other ornamental details, and adapted for being polished up, so as to imitate statuary marble very effectively. *External angles* should be in Parian or Keen's cement, the backs to windows as much as possible; and back linings to the boxings for the woodwork, being exposed to contact with fresh brickwork, frequently become affected by the damp and rot. Skirtings, dados, and surbase mouldings are very generally executed in this material. It is desirable to be laid on a Portland cement ground.

Scagliola for shafts of columns or pilasters, friezes, panels, &c., must be specified, with the name of the marble, which they are to imitate—as Sienna, verd antique, porphyry, granite, &c.—and according to approved specimens selected previously.

Dub out with plain tiles and cement, or nails and oakum, for all cornices, panels, and other projections, where requisite.

Old Work.—When old brickwork is to be rendered in cement, specify that the joints are to be raked out, the face well hacked to produce a key, and thoroughly saturated with abundance of water before the cement is applied; the surface to be lined in courses, and jointed, and colored two coats.

All the ceilings in the *best rooms* to be twice *distempered,* and if there is to be any party-colouring, or picking out with colour, it should be described. It is desirable to give the ceilings, which are to be distempered, two or three coats of painting, as it solidifies the plaster, and facilitates any future distempering or colouring. The ceilings of the secondary rooms to be twice whited.

The walls of offices, &c., twice colored.

Repair and make good when and where required, and after the several trades; and cut out and repair all blisters and other blemishes, and make good.

To guarantee all the work for 12 months after completion.

PLUMBER.

Material.—The lead, whether cast or milled.

The *Gutters.*—Specify weight of lead; the current, drips, lead to turn up inches high against parapet, and under slates or tiles. Flashings of 4 or 5 lbs. milled lead. Form cistern heads in gutters, hips, ridges, and valleys; the lead to be well dressed round all rolls, and fastened with stout lead-headed nails.

Flats.—State weight of lead.

The *Cisterns.*—State weight of lead to bottom and sides respectively. Waste-pipe; service with proper ball-cock, supply pipes to several sinks, and other parts, with brass taps.

Sinks.—Weight of lead, lining to bottom and sides. Apron-pieces and waste-pipes with brass belltrap.

Water Closets.—Apparatus and fittings, soil-pipes, giving weight of lead, and traps. Force-pump.

N.B.—It is the best in the country to have a large cistern for the general supply, and which acts as a feeder to the rest, and to keep this regularly filled at stated periods by water, horse, or hand power.

The whole of the work is to include all labor, solder, laps, joints, wall-hooks, lead-headed nails, and every other requisite, and the whole to be left perfect, and all apparatus in complete action, at the end of the whole works.

PAINTER.

Material.—The whole of the paint is to be ot the best white lead and oil, except when otherwise specified.

Stop, knot, and paint 3 or 4 coats all the woodwork throughout.

Flatting and Graining.—State the parts, that are to have one coat of flat extra, or to be grained wainscot, first or second quality; bird's-eye Maple, Brocatella; Verd Antique, and varnished 2 coats, with the best copal varnish. In the very best work it should also be pumiced, and treated like carriage painting. *Zinc.*—State any parts, that are to be finished with a coat of zinc color. The white, in rooms where there are gaslights, should be done in zinc, as it preserves its clearness and brilliancy. It should be specified, whether any portion is to be painted in party-color, or pricked in, or gilt.

The *gilding* of any parts should also be particularized, or a sum reserved for the purpose.

GLAZIER.

To stop in the sashes with the best picked Newcastle crown-glass. The whole well bedded, bradded, and back-puttied. Specify the sashes, if any, to be glazed with sheet, patent plate, British plate, plate-glass, rough fluted plate, ground, or diapered glass, as also any colored, stained, or cathedral glass, which it may be desired to introduce; as also quarry lights for church windows.

It is very necessary, in the superior sorts of glass, to describe very precisely the weight per foot, and the gradations of qualities, and it should be observed, that the position of the glass, whether upright, or flat, or inclined, materially influences the selection.

There is the usual and the extra thick glass in the crown; that selected for glazing and pictures being assorted as A and B; and the usual glazing qualities into best, seconds, thirds, fourths, and coarse, and the price varying, not only as to quality, but as to size, up to 4½ and 5 feet superficial.

The patent plate varies in weight from 13 oz. to the foot to 24 oz. No. 1 averages $\frac{1}{18}$ inch thick, with the weight of 13 oz.; No. 2 averages $\frac{1}{12}$ inch—17 oz.; No. 3 averages $\frac{1}{10}$—21 oz.; and No. 4 averages full $\frac{1}{9}$ inch—24 oz. The best B are distributed into Nos. 1, 2, 3, and 4, and seconds C also into Nos. 1, 2, 3, 4.

Quarry Glazing.—Glaze the lights with the best Newcastle crown glass in lead, well banded in diamond or oblong squares, cemented both sides, the joints turned on the outside, and fastened with copper.

N.B.—The lead work is made up into lengths, called calms, of 4 feet 6 inches; when squares are 6 × 5 there should be 1 lb. of lead to 3 calms; when 7½ × 5½ 2 lbs. to 5 calms.

PAPERHANGER.

Properly prepare the surface of the walls, and line the same with stout lining paper. Paper thereon. The several rooms or floors should be distinctly enumerated, and the prices of the several papers specified, exclusive of hanging, and whether to be cut close against the plinth, dado or cornice, or to have borders, the prices of which should be stated; as also the rooms, that might have to be hung in panels. Specify the block or gold moulding how many inches high. It is also desirable to have a few yards of each paper left, in the event of repairs being required subsequently.

IRONMONGER.

Provide all the locks, hinges, shutters, bars, and other fastenings mentioned in the Joiner's particular, as also all hooks, bolts, knobs to shutters, and furniture to the doors throughout; and any patent swing hinges, or springs, guard bars to windows, ranges, stoves, and grates, come properly under this head, but usually they are matter for subsequent decision.

SMITH AND BELLHANGER.

The whole of the wires for the bell-hanging to be of copper, with all necessary cranks, levers, pulls, and tubes for the concealed wires; complete in every respect, and finished off in the most workmanlike manner; the several bells to be bright, of the best bell metal, of assorted tones, so as to be clearly distinguishable the one from the other.

Provide and hang the bells. Describe the numbers of the bells and pulls to each floor; the carriages and springs, pendulums, with names of the rooms thereon. The prices of the knobs and furniture should be stated, unless left for future selection, and not to form part of the contract. Pull knobs and striking bells (which do not ring, but strike only) in such parts as may be directed.

Provide and fix bells from the principal entrance door, and servants' offices doors, with knobs and inscribed plate to each.

Iron Sashes and Frames.—Provide and fix scrapers to entrance doors. The whole to be left in perfect working order.

GAS FITTER.

Gas is now so generally introduced in all classes of buildings, that it is extremely desirable that the tubings should form part of the specification, as they can be easily introduced, while the building is in carcase. The reader is referred to the specification of University Hall for particulars.

It is to be observed, that it will be well for the Architect always to insist, that the system of piping by the plumber, bell-hanger, and gas-fitter, should be submitted to him before being proceeded with, in order that he may prevent any unnecessary and unskilful cuttings away, or unsightly lines of tubing, as those tradesmen are very careless, and the workmen utterly reckless as to the consequences of their changes in the brickwork. In fact, it is well for the Architect to provide specially for a direct communication from the basement to the roof by an accessible tube, shaft, or chase, which should receive all pipes, tubes, and wires, &c., and thus avoid future trouble and inconvenience, and allow the opportunity of access, inspection, and repair, without pulling a house to pieces.

Memoranda or Hints for a Particular of Works for Premises out of Repair, to make good Dilapidations, or to put them into proper Tenantable Condition.

Roof. — *Strip* tiling or slating, and recover ditto with new, firring up rafters, making good the battens or lathing, bringing in the old sound slates or tiles as far as they will go, and resetting the hip and ridge tiles in stone lime mortar, fastened with nails. Filleting in cement.

Repair tiling or slating where defective, and replace with new the broken, cracked, decayed, or deficient tiles. Fillets.

Gutters.—Take up the lead, examine and repair the boarding and woodwork under, and relay. Cistern heads. Clean out carefully, and examine the leadwork, solder all cracks in ditto, or take up and relay any cracked, decayed, or unsound lengths.

Chimney Shafts.—The pots and tops of chimney shafts to be taken down 2 or 3 feet and rebuilt, with proper plain tile cresting and flaunching in cement, and set pots on ditto. All the deficient, broken, or cracked pots to be replaced with new. Repoint the rest, or the pots to be taken down and reset in cement with proper plain tile cresting and flaunching; the deficient, cracked or broken ones to be replaced with new. The rest of the shaft to have the perished mortar raked out from the joints, and repointed down to the roof.

BRICKLAYER.

Open, clean out, repair and make good the privy, drains, water-courses, cesspools. Cart away and remove all the soil, dirt, and rubbish.

Fronts.—Erect scaffold, take off coping and courses of brickwork of parapet, rebuild the same, and reset or put new coping. Wash, color and point the front with neat tuck and *pat* pointing, or with flat joint and jointed. Look to sills whether broken.

Reveals whether plastered. Or rake out mortar from joints of brickwork and render surface in cement, jointed and colored twice a stone tint.

Make good all the defective brickwork and pointing throughout, and all brick and tile paving.

CARPENTER.

Repair enclosures, partitions, floors, linings, skirtings, dados, doors, frames, boxings, sashes, shutters, cisterns, dormers. Put new sash lines, new pulleys and beads, and fastenings where decayed, broken, or deficient. Ease doors and windows for painter.

Staircase.—Bearers, treads, or risers, balusters.

Note.—Any outside fencings, palings, railings, gates, lean-to sheds, enclosures.

MASON.

Take up and relay pavements, steps and kerbs, sinks or sills, copings, and replace cracked or broken with new.

Repair and clean chimney-pieces, mantels, slabs, hearths, jambs and slips.

PLASTERER.

Wash, stop and color or limewhite two coats all the walls to cellars, areas, yards, and as before done.

Repair, wash, stop and whiten or color ceilings and walls.

PAINTER.

Paint all the inside and outside wood, iron, stone, and other works as before done (thrice) in good oil color, the outside one coat extra, the inside last coat flatted.

All the new work to be knotted and properly brought forward. Cement front to be painted.

Note.—As to graining and varnishing certain parts.

GLAZIER.

Stop in all the broken or double cracked squares of glass. Cut out the perished putty and restore ditto with new, and leave all whole and clean at the conclusion of the whole job.

PAPERHANGER.

Strip the paper, repair plastering or canvas and reline and repaper as before, with or without border or moulding.

PLUMBER.

Examine and repair all the leadwork, the hips, ridges, valleys in roof, gutters, flashings, flats, cisterns, sinks, coppers, and all the service, waste, soil, rain-water, and other pipes, as also all taps and cocks throughout the premises ; and open, and clean, and make good the apparatus to water-closets, cranks, pulls, wastes, and ball-cocks, &c., &c., and put all pumps into proper working order.

BELLHANGER.

Put into working order all bells, pulls, and cranks, or provide and fix in the rooms of entrance, and one-pair two pulls in each with best plate cranks, copper tube, levers, wires, &c., &c., complete. Provide and fix one large pull at front door.

Pulls in all the bedrooms with best purchase cranks, tubing, &c., complete. Best turned bells of assorted sizes, mounted on best plate carriages, spring pendulums, &c.

SMITH.

Take off all the locks, bolts, latches and other fastenings ; provide new or repair, clean and refix such as are sound, replacing all the deficient keys with new, and putting new furniture where requisite, or relacquering and refixing old.

Hammer, clean and make good the iron railing and other work, and repair ditto completely for the painter.

The whole to be left sound and perfect at the conclusion of the whole of the works ; and the several rooms, passages, lobbies, landings, stairs, and closets, to have the floors washed down and scoured twice, so as to leave all clean and fit for occupation.

Heads for a Form of Contract.

The heading begins with date of agreement, and names of the party employing, and the Builder or Contractor, respectively stated as being of the *first part*, and of the *second part.*

The first division comprehends the duties and responsibilities of the Builder; the second, the obligation of the Employer.

Duties and Responsibilities of the Builder.

First state that the Builder agrees for a *stated sum*, as of 10,000*l.*, to be paid to him, his heirs, executors and administrators (*not assigns*, as the object is, not to allow an assignment, which might lessen the immediate responsibilities of the Builder), to execute the works in the *soundest and most workmanlike manner*, and provide all *materials*, matters, and things of the *best quality*, and agreeably to the *plans, drawings, and specifications*, signed therewith, or which may be *implied therefrom*, and such *further instructions, drawings*, &c.

To the satisfaction of the Architect or Engineer (named), or other the Architect or Engineer for the time being.

To make good all cracks and *defects during progress* of works, or *in consequence thereof*, and to *adjoining premises.*

State *time of commencement*, or *forthwith*, and time of completion.

Penalty in case of failure—per day, per week, per month; or state *intervals of completion* for several special portions.

If progress not satisfactory, Employer to have power to *employ men to complete.*

Contracting Builder to *keep foreman on* the works. *Power* of Architect or Engineer to *dismiss foreman*, and employ another.

Materials, if in opinion of Architect, Engineer, or Clerk of the Works, improper or bad, to be removed within 24 hours after *written* order to that effect, under penalty of   per diem. In default, to be considered as *rubbish and removable*, and replaced with good.

Alterations, and additions, or omissions, a *written notice* required; to be *measured and valued* as per *schedule.* Weekly account of extras to be rendered.

In case of *default of proceeding* duly with work, *insolvency, or bankruptcy, Employer may proceed* (giving notice) to *employ other* respectable workmen. *Costs thereof* to be paid by contracting Builder.

Materials on the spot the property of Employer. *Contracting Builder answerable* for loss.

Clerk of Works not to set out works.

Contract to include all that is requisite for the completion of the job, and incidental thereto.

Obligations of Employers.

To pay the contract sum. *Periods* of payment—3, 5; or at a calculated per-centage of from 80 to 90 per cent., which may give rise to disagreement. Better to state certain periods of progress for the payments, upon certificate of Architect.

Power to retain costs, or penalties, or forfeitures incurred.

Provision as to deficiency on part of Builder.

No certificate to bar remedy as to bad materials or unsound work afterwards discovered.

Arbitration clause as to quantity or value of extras.

But not to extend to questions as to the nature or quality of the work, which must be left to the sole judgment and discretion of the Architect or Engineer.

Form of Contract for Building.

N.B.—It is to be understood that this and all other model forms must be subject to be modified according to the special circumstances of every case.

Articles of Agreement made this day of one thousand
eight hundred and , **Between** A. B., of
in the parish of , in the county of
, hereinafter called the Employer, of the one part, and C. D., of ,
in the parish of , in the county of ,
builder, hereinafter called the Contractor, of the other part.

The said Contractor in consideration of the sum of pounds of lawful money of Great Britain to be paid to him by the said Employer as hereinafter mentioned, doth hereby for himself and for his heirs, executors and administrators covenant and agree with the said Employer, his executors, administrators and assigns in manner following, **That is to say**, that he, the said Contractor or his executors or administrators shall and will execute and complete in a sound and workmanlike manner, *and agreeably to the provisions of the Metropolitan Buildings Act or of any Act or Acts of Parliament which may be passed to alter, explain, or amend the same* [to be omitted when not in the Metropolitan district], all and singular the artificers' works required in building the carcase of a , intended to be erected in in the parish of , in the county of , and the appurtenances thereto, agreeably to the plans, elevations and sections thereof already prepared and signed by the parties hereto, and according to such other drawings and instructions as may be furnished in writing by E. F., of , Architect, or other the Architect for the time being of the said Employer from time to time during the progress of the works, and also in accordance with the specification and description of the several works thereof, both as to materials and workmanship hereunder written (copies of which drawings and specification are to be taken by the said Contractor, for his own use, at his own costs and charges ;) **And also** that he, the said Contractor or his executors or administrators at his or their own costs shall and will provide all and all manner of necessary labor, workmanship, materials, cartage, scaffolding, strutting, shoreing, temporary enclosures and fences, and also all tools, tackle, cordage, rules, templates, models and moulds of every description, and all other matters and things of the best quality, **And** shall complete the same works respectively in the most substantial and workmanlike manner according to the directions and instructions contained and expressed in the same specification and drawings, or which may be implied therefrom or be incidental thereto, and according to such additional and other instructions and working drawings' as shall or may be given and furnished in writing from time to time by the said E. F., or other the Architect for the time being of the said Employer, his executors, administrators or assigns; and the works included in such additional or other instructions and working drawings shall be considered (for the purpose of carrying into effect the works) as being included in the said sum of pounds, and not as additional or extra thereto unless specifically stated in writing to be extra as hereafter provided; **And also** that he the said Contractor, his executors or administrators, shall and will make good all cracks, fractures or damages which may occur to the said premises, or those adjoining thereto, at any time during the progress of the works or in consequence thereof, and which reparations shall be and are hereby agreed and declared to be considered as forming part of the said specification or description, as fully as if the same had been expressly included and mentioned therein. And further, that the said Contractor, or his executors or administrators shall and will provide, if required by the Paving Board, any outside gangways, with proper posts and rails to their satisfaction, during the progress of the works, and alter and enlarge the same as may be required, And also shall and will pay all fees connected with the District Surveyor, Court of Sewers, Paving Board, and Water Company, And will forthwith commence the said works, and shall and will proceed in completing the whole of the house and offices, so that the whole of the works to be performed according to the tenor of this contract be duly executed and finished to the satisfaction of the said E. F., or other the Architect for the time being of the said Employer, his executors, administrators or assigns, on or before the day of , one thousand eight hundred and , under the penalty of pounds of lawful money for each and every week or day after the said day of , that the said works shall remain unfinished, and by way of liquidated damage. And that in case the said Contractor, his executors or administrators shall refuse, neglect, or be incapable to completely finish the said several works within the time hereinbefore limited for that purpose, then and in either of such cases it shall be lawful for the said Employer, his executors, and administrators and assigns, to employ a sufficient number of workmen with sufficient and requisite materials and things to complete the same; and the said Contractor hereby fully empowers and authorizes the said Employer, his executors, administrators and assigns, to retain and deduct the cost, charges, and expences of so doing out of and from the money agreed to be paid to him as hereinafter mentioned. And further, that the said Contractor, his executors or administrators, shall and will during the progress of the said works provide and keep one or more competent foreman or foremen to superintend the said works, and to remain constantly during the hours of work upon the premises; And if the said E. F., or other the Architect for the time being as aforesaid, shall at any time or times consider any one or more of the said foremen or other workmen as in any wise incompetent or as acting improperly, it shall in every case be lawful for the said E. F., or other the Architect for the time being as aforesaid, to dismiss or at his discretion to supersede them or him, and put others or other in their or his place at such weekly payment as the said Architect may think proper, which payment shall be paid and deducted out of the moneys which may be due to the said Contractor, his executors or administrators, by virtue of these presents. And it is expressly agreed, that should any materials be brought on the premises for the purpose of being used or be actually used in the said works, which in the opinion of the said E. F., or other the Architect for the time being as aforesaid, or of the Clerk of the Works employed on the part of the said Employer, his executors or administrators, may be deemed in any respect improper for the purpose intended, such material shall be removed by the said Contractor, his executors or administrators, within the space of twenty-four hours next after an order to that effect shall be given in writing to the foreman or other principal workman of the said Contractor upon the works by the said Employer, his executors, administrators or assigns, or by the said E. F., or other the Architect for the time being as aforesaid, or by the aforesaid Clerk of the Works; and in default of such removal the said Contractor shall forfeit or pay to the said Employer the sum of pounds of like lawful money as aforesaid, by way of liquidated damage, for every day the same or any part thereof shall remain unremoved after the expiration of the said twenty-four hours, and in default of the said Contractor, his executors and administrators removing the same after such notice as aforesaid, such materials as last aforesaid shall be considered as rubbish, and the said Employer, his executors, administrators or assigns, or the said E. F., or other the Architect aforesaid, or the said Clerk of the Works may cause the same to be carted away, and the expense of such removal, and also the said last-mentioned penalty or penalties of *5l.* per day shall be deducted by the said Employer, his executors, administrators and assigns, and he and they is and are hereby authorized to deduct the same, and all other liquidated damages, from the amount due on the completion of this contract accordingly. And it is further agreed that if the said Employer, his executors, administrators or assigns shall think proper at any time or times to make any alterations or additions or omissions to and in the said works herein contracted for, the said Contractor, his executors or administrators, shall and will alter, add to, or omit accordingly as the case may require, upon a written notice or direction specifying such alterations, additions, or omissions as extras as the case may be, signed by the said E. F., or other the Architect for the time being as aforesaid, delivered to the said Contractor, or his executors or administrators or one of them, or his or their foreman or other principal workman. And it is expressly agreed that the said Contractor, his executors or administrators, shall not be considered as having authority to make any alteration, omission, or addition, nor be entitled to make any claim for any alteration or addition whatsoever without such specific written notice or direction for the same previously given and signed as aforesaid; nor unless also a weekly bill of the same be delivered from week to week of such extra works as they are being executed. And further that any such alteration, addition, or omission, shall not vacate this present contract, but the cost of any such for which such notice in writing shall have been given, shall be ascertained by measurement or valuation in all respects according to the prices stated in the schedule at the end of the said specification, and shall be added to or deducted from the amount to be paid by the said Employer as hereinafter mentioned as the case may be; and in case of any addition in value, the same shall be paid for at the conclusion of the whole works. And it is further agreed that the said Contractor, his executors or administrators, shall not unless with the consent in writing of the said E. F., or other the Architect for the time being as aforesaid, make any contract or sub-contracts for the execution of the works hereby contracted for or any part thereof, nor assign or transfer this contract. And further, that in case the said Contractor, his executors or administrators, shall not regularly proceed with the said works to the satisfaction of the said E. F., or other the Architect for the time being as aforesaid, or of the said Employer, his executors, administrators or assigns, it shall be lawful to and for the said Employer, his executors, administrators and assigns, or the said E. F., or other the Architect for the time being as aforesaid, to give or cause to be given or left at the usual or last known place of abode or business of the said Contractor, his executors, or administrators, notice or notices in writing requiring the said Contractor, his executors or administrators, forthwith to proceed with the works; And in case the said Contractor, his executors or administrators, shall delay for the space of   days after service of such notice as aforesaid to proceed in an efficient manner with the said works, or if the said Contractor, his executors or administrators, shall become insolvent or be declared bankrupt, it shall be lawful for the said Employer, his executors, administrators, or assigns, or his or their Architect, to employ any other respectable workman or workmen, either by contract or measure and value, or otherwise to proceed with the said works, and to complete the same and pay to the said workman or workmen the amount of his or their charges for the same, and for all necessary materials to be found or provided for such completion, out of the money which shall be then remaining due to the said Contractor, his executors or administrators, on account of this contract. And further, that the moneys which previously to such default shall have been paid to the said Contractor, or his executors, or administrators, on account of or in respect of any work or materials then already done, executed or provided as aforesaid, shall be considered as the full value thereof, and be taken by the said Contractor, and his executors or administrators, and every of them, in full payment and satisfaction not only of and for the said works and materials, in respect of which payment may have been made, but likewise of and for every other work and materials, which the said Contractor, or his executors, or administrators, shall then have done, executed or provided, although no payment may have been previously made in respect thereof. And the said Contractor further agrees, that all balance or moneys, which but for the clause or provision last hereinbefore contained, would then or thereafter have been or become due or payable to him or to his executors, or administrators under this contract, together with all the materials then delivered for the purposes of the work hereby contracted for, and then being upon or about the premises, shall upon such default as aforesaid become, and be in all respects considered as the absolute property of the said Employer, his executors, administrators and assigns. And further, that if the balance moneys and materials so to become the property of the said Employer, his executors or administrators, as last aforesaid, shall be insufficient to cover such charges for workmen and materials as are hereinbefore lastly directed to be paid thereout, then the said Contractor, his executors or administrators, shall and will make good and pay such deficiency upon demand. And further, that no materials brought upon the said premises by the said Contractor, or his executors or administrators, or either of them, or by his or their order, which shall be suitable and proper to be used in or about for carrying on the said works, shall on any account or pretence whatsoever be taken away by the said Contractor, or by his executors or administrators, or any other person or persons whomsoever, without the special license or consent in writing of the said Employer, his executors, administrators or assigns, or of the said E. F., or other the Architect for the time being as aforesaid, or the said Clerk of the Works; but that neither the said Employer, nor his executors, administrators or assigns, nor the said E. F., or other the Architect for the time being as aforesaid, nor the aforesaid Clerk of the Works, shall be in anywise answerable or liable for any loss or damage, which may happen to or in respect of the said materials, either by the said materials being lost, stolen, or injured by the weather, or otherwise howsoever. And, that neither the said E. F., nor the Architect for the time being aforesaid, nor the said Clerk of the Works, shall be required to set out any of the works to be done, but that the said Contractor, his executors, or administrators, shall execute the same from the copies of the drawings and specification to be taken by the said Contractor as aforesaid for his own use. And that neither the said Employer, his executors, administrators, or assigns, nor the said E. F., or other the Architect for the time being as aforesaid, nor the aforesaid Clerk of the Works, or any of them shall be answerable for any deviations made therein from the original drawings. And it is hereby mutually agreed that the works and materials hereby contracted to be done, executed, and provided, shall include all that is requisite for the erection and completion of the said mansion and the appurtenances and all the works connected therewith and incidental thereto. And in consideration of the premises, the said Employer for himself, his heirs, executors and administrators doth hereby covenant and agree with the said Contractor, his executors and administrators, that he the said Employer, his executors, administrators or assigns shall, subject to the proviso hereinafter contained, well and truly pay or cause to be paid to the said Contractor, his executors or administrators the aforesaid sum of pounds by the instalments at the times and in the manner following (that is to say)—a first instalment of pounds when the walls of the basement have been carried up to their full height, the drains laid in and the joists or girders fixed; a second instalment of pounds when the walls of the drawing-room floor have been carried up to their full height and the joists or girders fixed; a third instalment of pounds when the roofs are covered in and with the chimney-shafts entirely completed; a fourth instalment of pounds when the Architect as aforesaid shall have certified, that the whole of the works have been executed and performed to his satisfaction; and the balance of pounds within months after the Architect as aforesaid shall have certified the completion as aforesaid of the whole of the works. Provided always, and it is hereby expressly agreed, that the said Contractor, his executors or administrators shall not be entitled to demand or receive any of the aforesaid instalments, until the respective works, on the due performance of which the payment of the said instalments are respectively made to depend as aforesaid shall be certified to be completed to the satisfaction of the said E. F., or other the Architect for the time being of the said Employer, his executors, administrators or assigns. And further, that the said Employer, his executors, administrators and assigns shall and may reserve and retain out of the balance remaining unpaid of the said sum of pounds, the amount of the costs and charges incurred by the said Employer, his executors, administrators or assigns in consequence of the improper execution of any of the works, or of his or their being obliged to employ workmen and others in or about the said works as hereinbefore mentioned, and also in like manner to deduct and retain the amount of the several penalties before mentioned, or such and so many of them as shall have been incurred in respect of the premises; provided nevertheless, that no penalty for delay in completion or due prosecution of the works shall be recoverable in case a delay shall arise or be caused by any strike of the workmen employed in the said works as shall not, in the judgment of the said E. F. or other the Architect for the time being, have arisen from the misconduct of the Contractor or his foreman or foremen. And in case the balance, after such payments and deductions as aforesaid, shall be insufficient for the purposes, then and in such case such and so many of the penalties hereinbefore mentioned, as shall have been incurred by the said Contractor or by his executors or administrators, or such part thereof as such balance shall be insufficient to satisfy, shall and may be recovered by the said Employer, his executors, administrators or assigns, not as a penalty or penalties, but as and in the nature of liquidated damages. And further, that the said Employer, his executors, administrators or assigns shall or may, if he or they think proper, in and to any action or suit, which may be brought against him or them by the said Contractor, or his executors or administrators, or any of them for the recovery of the said sum of pounds or any part thereof, plead, set off and deduct, against or from the amount sought to be recovered in such action or suit, any of the aforesaid sums hereinbefore agreed to be reserved, retained and deducted according to the provision hereinbefore contained. Provided always, and it is hereby expressly agreed and declared, that if at any time after the said building and works hereby contracted to be performed or any part thereof shall have been certified by the said E. F. or other the Architect for the time being as aforesaid to have been completed, and either before or after the said Contractor, or his executors or administrators or either of them, shall have received the several sums of money hereinbefore contracted to be paid to them for the performance thereof, it shall appear, that the said Contractor, or his executors or administrators have or hath used any unsound materials in any part of the building or works hereby contracted to be performed, or hath or have in any other way not performed the said works according to the stipulation and true intent and meaning of these presents in a workmanlike manner and to the satisfaction of the said E. F., or other the Architect for the time being of the said Employer, his executors or administrators, then and in either of such cases it shall be lawful for the said Employer, his executors, administrators or assigns, notwithstanding anything in these presents contained or any certificate, which may have been given by the said E. F., or other the Architect for the time being as aforesaid, of the due completion of the said building and works or any part thereof, to institute any action or suit, and take any proceedings, which the said Employer, his executors or administrators shall be advised against the said Contractor, or his executors or administrators or any or either of them, for the damage which shall have been sustained in consequence of such use of any unsound materials or of the non-performance or non-completion of the aforesaid works or any part thereof in a workmanlike manner and in all other respects according to these presents. And it is hereby agreed and declared, that, in any such action or suit or other proceedings as last aforesaid, any certificate, which shall have been given by the said E. F., or other the Architect for the time being as aforesaid, or otherwise, shall not in any manner bar or prejudice such action, suit or other proceeding, or be considered conclusive of the sufficiency of such works or materials. And it is hereby covenanted and agreed by and between the said parties hereto, that the said E. F., or other the Architect for the time being of the said Employer, his executors or administrators shall be sole arbitrator and judge between the said parties hereto, as to the quality of the materials and the soundness or nature and sufficiency of the works provided, done and executed in pursuance of this contract; but that if any dispute or difference should happen to arise between the said parties touching or concerning the quantity or value of any works, which, by reason of any written directions or direction as hereinbefore mentioned, shall be added, altered or omitted, then every such dispute or difference shall be left to the determination and award of two indifferent persons as referees, one to be named by or on the part of the said Contractor, his executors or administrators, the other by or on the part of the said Employer, his executors, administrators or assigns; or in case the said referees should not make their award in writing in the matter aforesaid within two calendar months after entering upon the reference, or by such further period as they may by writing under their hands appoint for that purpose, then to the determination and award of an umpire to be named and appointed by such two referees as aforesaid before entering upon the matters of such reference to them as aforesaid. And each of them, the said parties hereto, doth hereby, for himself respectively, and for his and their heirs, executors and administrators, covenant and agree with and to the other party hereto, that they, the said parties respectively, and their respective executors, administrators, or assigns shall and will stand to and abide, perform, and keep the award and determination of the said two referees to be made as aforesaid; or in case of their not making their award within the period hereinbefore in that behalf mentioned or provided for, then to abide, perform and keep the award and determination of the umpire, so to be appointed by the referees, touching the several matters and things referred to them; so as such award or determination of such two referees as aforesaid, or of such umpire as the case may be, be made in writing under their respective hands, and in case of the award or determination of such umpire, if it be made within one month after his nomination as aforesaid, or within such further period, as he may by writing under his hand appoint for that purpose. And it is further agreed by and between the said parties hereto, that the submission hereby made shall, at the option and expense of either of the same parties requiring the same, be made a rule of one of her Majesty's Courts at Westminster, and all the costs and charges attending such reference or arbitration as aforesaid shall be in the discretion of the said referees or umpire, as the case may be, and shall be paid and satisfied pursuant to their or his award. In witness whereof, the said parties to these presents have hereunto set their hands and seals the day and year first above written.

General Conditions of Contract for Engineering Works, drawn up by James Simpson, C.E.

What the Contract includes.—The contract includes the execution of the whole of the works shown on the drawings, as well as those described or implied in the specification, together with all minor operations and details, which may not be shown or described in the drawings and specification, but which are necessary to the proper execution and perfect completion of the works, according to the true intent and meaning of the contract.

The Contractor is to provide the whole of the materials, as well as all labor, carriage, tools, implements, tackle, and all or other things necessary for the due and proper execution of the works.

Drawings and Specification.—Dimensions stated in the specification or figured on the drawings are to be worked to in preference to the measurements by scales, and enlarged drawings are to be adhered to in preference to those of a more general nature. Moreover, any working or detailed drawing, that may be furnished by the Engineer or Superintendent during the progress of the works, is to be considered a working drawing under the contract, and strictly adhered to.

Works to be executed in an approved manner.—The whole of the works are to be executed with due diligence and expedition, and are to be performed and completed in the most approved, substantial, and workmanlike manner, in perfect conformity to the drawings and specification, and to the entire satisfaction of the Engineer.

Engineer's Superintendence.—The works are to be carried on under the control and supervision of the Engineer or Superintendent appointed by him; and the Contractor must attend to and execute without delay from time to time all orders and directions given by the said Engineer or Superintendent.

The works are to be set out by the Contractor, who will be held responsible for their correctness; nor will any plea as to the acts, orders, directions, or general supervision of the Engineer or Superintendent be admitted in justification of any errors of construction, or departure from the terms of the contract.

Materials on Site of Works.—The earth, stone, gravel, clay, and other materials on the site of the works, or excavated from the foundations, are to be at the disposal of the Contractor, so far as use can be made of the same for the purposes of the contract, and he is to be at liberty, under the approval of the Engineer, to use in the works such portions of the said materials as are suitable and in accordance with the terms of this specification.

Objectionable Materials and Workmanship.—If at any time during the progress of the work the Engineer or Superintendent shall disapprove of any of the materials employed, the Contractor is forthwith to remove such materials from the ground, and provide others of approved qualities; and in case any portions of the works executed shall be considered defective or imperfect, or not in accordance with the terms of the contract, such portions shall be forthwith removed, and the work re-executed in an approved manner.

Additional Works and Alterations.—In case the Engineer should consider it desirable to alter the dimensions or character of any of the works, thereby increasing or diminishing the quantities contained in the contract, such alterations shall not in anywise vitiate the contract, but shall be performed by the Contractor under all the stipulations and responsibilities herein contained; the value of any additions to or deductions from the contract quantities being estimated according to the schedule of prices attached hereto, and the amount added to or deducted from the contract sum, as the case may require.

Time of Completion.—The works comprised in the contract are to be completed within calendar months after the commencement thereof, under forfeiture of the sum of £ per week, to be paid to or retained by the Company, in liquidation of ascertained damages and not by way of penalty, for each and every week the work shall remain unfinished after the expiration of the period above named.

Accidents and Damages.—The Contractor is to take upon himself the risk of, and be answerable for, all accidents and damages of any kind, which may occur during the performance of the contract, and which in the opinion of the Engineer are consequent upon or in any way attributable to the execution of the works. In case of damage to the works, he is to repair and make good the same as soon as possible at his own cost and charge; and in respect of any other kind of accident or damage, he is forthwith to reimburse and compensate the Company or other injured parties, as the case may require, for all expenses, losses, and injuries, they may have sustained in consequence of such accident or damage.

Contractor to uphold Works.—The Contractor is to maintain, uphold, and guarantee the stability of the works, and keep them in perfect repair and condition for after the completion of the contract, and if during this term any defects shall appear, they are forthwith to be made good by the Contractor, at his own cost and charge, to the satisfaction of the Engineer, so that the works may be delivered up in a perfect condition at the end of the above-named period.

Mode of Payment.—Advances of money on account will be made upon the Engineer's recommendation, as the works proceed, and the final balance will be paid months after the completion of the contract.

Disputes to be settled by the Engineer.—If any disputes or differences should arise between the Company and the Contractor as to the quality of the materials, or the manner of executing the works, or as to any charge, account, or other matter connected with the contract, such disputes or differences are to be settled by the Engineer, whose decision shall be final and binding on both parties.

Security.—The Contractor will be required to give security for the due performance of the contract, by bond of two approved parties, jointly and severally bound in the penal sum of .

Tenders.—Tenders for executing the works are to be made out in the form attached hereto, and addressed to ,
and delivered on or before ,

endorsed "Tender for ." The Company do not bind themselves to accept the lowest or any other tender.

FORM OF TENDER.

To

I hereby tender to execute the works comprised in contract No. , agreeably with the drawings, and all the conditions and stipulations of the specification issued by you, and dated for the total sum of (insert sum in writing and figures).

And I agree to add to, or deduct from, the contract sum (as the case may require) the value of any additional works executed, or of any alterations or diminutions made in the works of the contract; such values being estimated according to the annexed schedule of prices, which are the same as this tender has been formed upon, and are calculated for works executed, manufactured, delivered and completed according to the terms of the specification.

Dated this day of 18 .

I am, &c.,

(Here to follow schedule of prices filled up).

Form of TERMS *for* LETTING PLOTS OF BUILDING GROUND *in , on the Property of , agreeably to a Plan laid down by , Architect.*

The term to be for 90 years from .

The several plots to be in the directions laid down on the plan, but the width for the frontage of each house is not limited precisely to that on the plan, but may be varied as shall be agreed.

The houses on to be not less than full-sized first or second rates, semi-detached. These plots to be let at the rate of *s.* per foot run.

The houses in to be not less than second-rate houses, and to be let at the rate of *s. per foot for the Crescent,* and for the Grove opposite.

The tenants to prepare all the roads, made up to their proper heights, or to pay to the Commissioners the cost of forming and completing the same, and the quarter space of the cross roads.

All the premises are to be provided with proper drains laid into sewers to be constructed by the Builders, to the satisfaction of the local Authorities.

The first three years to be allowed half rent.

The houses to be built within years from the date of entering into agreement to build, on pain of forfeiture.

Plans, elevations, sections, and specifications to be submitted for the approval of the Architect before commencing any of the buildings, *or* the several houses to be built in all respects agreeably to plans, elevations, and sections prepared by the Architect.

No other than stock bricks are to be used, and mortar composed of fresh lime and sharp grit. All timber to be Baltic, joists not less than 9 × 2, and all the other materials are to be new and sound, and of the best quality for their several purposes.

The roofs to be slated and the chimney-pots of cement.

The entrance-floors not to be less than   feet high, the bedrooms not less than   feet high.

No other class of buildings shall be erected on the said plots of ground after the lease has been granted, without the approval in writing of the ground landlord, or of his agents duly appointed.

Each house to be insured in two-thirds of the value, and the receipts for the premiums to be produced yearly, when required.

The Lessees shall not be entitled to inquire into the title of the Freeholder, but may inspect the last deed, by which he holds the property, previously to entering into an agreement to take ground.

The leases are to be prepared by the Freeholder's solicitor, for each of which the Lessee is to pay the sum of   pounds, and the sum of   guineas to the Architect, for inserting a plan on lease and counterpart, and inspecting and certifying the completion.

Upon *production* of the Architect's *certificate*, and of the *receipt of the District Surveyor* for his fees, the lease will be granted.

Modifications of these terms will be entertained in regard to parties disposed to take considerable plots.

PARTICULARS FOR THE HOUSES INTENDED TO BE BUILT *in continuation of Upper Seymour Street and Eastward of it*, ON THE DUKE OF BEDFORD'S PROPERTY, *Hampstead Road, May*, 1840.

Rates of Houses.—To be third rates.

Frontage of Houses.—Not less than 16 feet.

Front Windows.—One in parlors, and two in each story above.

Heights of Stories.—Not less than—basement 8 feet 3 inches, ground-story 9 feet 6 inches, one-pair 9 feet 6 inches, two-pair 8 feet 4 inches, garrets 7 feet 2 inches, clear of finishings.

Floors of Basement Stories.—Not less than 5 feet above invert of sewer.

Foundations of Houses.—To be carried at least 7 feet below present surface of ground, the lowest 3 feet of which may be either concrete (wider by 6 inches on each side than footings of walls) or brickwork (at option of Builder), and the rest brickwork.

Foundations of Garden and Fence Walls.—To be carried down 2 feet 6 inches below furnished surface of ground, the lowest 1 foot 3 inches of which is to be concrete, not less than 2 feet 3 inches wide, with an additional depth of 1 foot of concrete of same width, if and where the Surveyor shall require it. (In any part either of house walls or garden or fence-walls, in which the clay has been disturbed or soft places are found, the foundations to be carried through to maiden earth.)

Height, &c., of Garden Walls.—Not less than 6 feet high above finished surface of gardens, and 9 inches thick, with piers 18 inches square, and not more than 10 feet apart.

Ditto of Dwarf Walls.—Same (height excepted) as garden walls. *Areas.*—To be feet wide in the clear.

BRICKLAYER.—*Brickwork.*—All external walls to be 1½ brick thick, flushed solid with good mortar, and built with hard sound grey stocks; and fronts of houses and return fronts (or flank walls) of end houses to be faced with Malm stocks (seconds of uniform color), with 12-inch gauged arches to all doors and windows. No place bricks to be used. All external faces of brickwork to be finished with a neat flush joint, and jointed.

Mortar.—To be made of good stone lime and clean river sand, and no loam or earth to be mixed with it.

Concrete.—To be made with 5 measures of good coarse gravel to 1 of unslated lime, well mixed, and beaten up with proper quantity of water, and not to be mixed till wanted to be used.

A *sewer* of the rate required by Commissioners of Sewers to be made along all the front of the ground, and to be made to connect with some suitable public sewer.

Proper and independent *drains* to be made from 3 feet beyond back wall of each house into sewer, with fall not less than ¼ inch per foot.

CARPENTER AND JOINER.—The *ground* to be kept properly *fenced in* with close boarding till houses and walls are completed.

Timber and Deals.—To be best Russian, Norway, or Swedish, well seasoned and free from sap.

No American timber or American deals to be used.

Roofs.—To have fir rafters 4½ inches × 2¼ inches, and not more than 12 inches apart, with purlins 4½ inches square, and to be battened with inch battens of yellow deal, 3 inches wide, with inch deal gutter boards.

Floor Joists, Trimmers, Girders, Binders, and other Joists.—Floor joists to be 10 inches × 2½ inches, and not more than 12 inches apart, and trimmers, girders, and binders, and other joists, to be of corresponding proportions.

Floors.—Basement story, 1¼-inch yellow deal, or 3-inch York. (In basement, if wood floors, the ground joists to be laid on sleepers bedded on 2 courses of brick footings leaving a clear space for air of at least 6 inches in height, and if stone floors, to be laid on 2 courses of bricks leaving a clear space for air of at least 6 inches in height.)

Ground-story and one-pair story, 1¼-inch battens. *Two-pair and attics,* inch deal.

Stairs.—Treads to be of 1¼-inch yellow deal, and risers inch yellow deal.

Doors.—*Basement,* 2-inch square framed. *Ground* and one-pair stories 2 inches and moulded on both sides. *Two-pair* 1½ inch moulded on both sides. *Attics,* 1½ inch and square framed. All *folding-doors* to be 2½ inches thick.

Shutters.—Front shutters in basement, two-pair, and attics 1¼ inch, back flaps 1 inch; front shutters in ground and one-pair stories 1¼ inch, back flaps 1 inch. Mouldings of shutters in each story to be same as those of doors in that story. *Sashes.*—1½ inch moulded.

SLATER.—*Roofs.*—To be covered with countess slates, copper nailed.

PLUMBER.—*Gutters.*—To have 7-lb. lead with 5-lb. flashings and hips or ridges.

Rain-water Pipes.—To be cast iron.

MASON.—Parkspring, Portland, or Bath stone cornice and blocking course to fronts of houses, and flank walls of end houses.

Areas.—To be enclosed with Portland or Parkspring kerb, 7 inches × 6 inches, and rounded on top.

Dwarf and Party and External Walls.—To be coped with 3-inch York.

Window Sills.—Front windows to have Portland or Parkspring sills, 7½ inches × 4 inches. Back windows to have York sills 7½ inches × 3 inches.

Chimney-pieces and Slabs.—Ground and one-pair stories to be of marble not less than inch thick. Other stories to be Portland or Parkspring stone.

Front-door Steps and Landings.—To be Portland or Parkspring stone.

All Copings, Stringings, and Cornices.—To be of Portland, Parkspring, or Bath stone.

Footway in Front.—To be formed and paved with 3-inch York, and a Moorstone or granite kerb.

Carriage Way.—To be formed and paved to the centre of street where there are opposite houses, and the whole of carriage way, where there are none.

SMITH.—*Forecourts and Areas.*—To be enclosed with iron rails (of a pattern to be approved) not less than 4 feet 6 inches high, with bars ⅞ inch thick if square, and inch if round, and not more than 6 inches apart from centre to centre.

Iron Chimney-bars.—To be put to all the chimney openings.

Balconies or Galleries.—Of a pattern to be approved to be put to front one-pair windows.

Throughout the works none but new and perfectly sound and good materials to be used.

No building to be erected behind houses exceeding 10 feet above level of parlor floor, nor extending more than 12 feet from backs of houses, or in, on, or over any forecourt or area.

All chimneys to be carried up to the roof of the house, and to the height of the other chimneys of the house.

No bricks to be made or burnt on the ground, and no earth, clay, sand, gravel, &c., to be dug or taken away (foundation digging excepted).

Mode of ESTIMATING *the probable* COST OF A BUILDING *by the* CUBICAL CONTENTS.

Measure from the bottom of the brick or stone footings of the walls to half way up the roof, and this will give the dimension of the height.

This should be multiplied by the superficial area, including all the walls.

The cubical contents so produced are multiplied by the sum per foot cube, which it is supposed would be proper for the class of building to be estimated. The amount will be the probable cost, exclusive of fittings, which will of course vary according to the taste and requirements of the Occupier.

Whenever a house, mansion, or other building has attached or detached offices, each erection must be taken and priced separately, according to the rate to which it properly belongs.

A dwelling-house in London of the third rate, or class, and plain country lodges, may be assumed to be worth *5d.* or *6d.* per foot.

An ordinary dwelling-house of the second rate, or class, may be supposed to be worth *7d.* per foot cube.

A first-class dwelling-house may be supposed to be worth *2d.* or

3*d.* per foot more, it being presumed that the construction is more solid, and the finishings of a superior character.

A building such as a nobleman's house, or club house, with stone elevation and internal finishings of a high class, may be taken at from about 1*s.* to 1*s.* 3*d.* per foot.

The above may be supposed to apply to town houses; but villas and detached country houses, having all the parts of an architectural character and no party-walls, may be taken at 1*d.* or 2*d.* per foot more, according to the difference of style and finishing.

In the case of any superior materials being employed, or of any decorations of a high sculptural class of art being introduced, a special sum of so many hundreds or thousands of pounds must be put down in addition.

The domestic offices may be taken at 4*d.* or 5*d.* per foot. Thus stable buildings of the ordinary class may be calculated at that figure; but if the finishings be expensive or fanciful, it may be increased to 1*d.* per foot more.

Workhouses, hospitals, warehouses, schools, and such like buildings, having large internal spaces and few divisions, and with the architecture of a simple and substantial character, in brickwork, may be taken at from 4*d.* to 6*d.* per foot cube. Lunatic asylums and prisons, requiring more special provisions and greater subdivisions, would be somewhat more expensive than ordinary buildings of this class.

Churches, chapels, or large rooms or halls for meetings of large assemblies, may be considered to be worth 6*d.* per foot cube; if, however, a tower or spire be added to the church, a distinct sum must be allowed for it. A Gothic tower of brick, faced with Kentish rag and with Bath stone dressings, and surmounted by a spire, rising to a height of 100 feet, would cost about 800*l.* or 1000*l.*, or if rising to 130 or 150 feet might reach 1500*l.* or 2000*l.*

OBSERVATIONS ON COMPETITIONS.

The system of competitions for designs for public buildings is now so generally accepted, in spite of the many evils and irregularities to which it may give rise, that it is useless to consider, whether in the abstract it is beneficial or not to the public or the profession. But the mode in which competitions have been carried out has been so confessedly productive of disappointment to both parties, that the aim of the profession has been for above twenty years to suggest a system, that should be fair and honorable, insuring to public bodies the services of the ablest Architects, and to the competitors a just decision upon the relative merits of their designs.

The report of a Committee of the Royal Institute of British Architects, appointed to consider the subject, was laid before a special general meeting in January, 1839, and ten years afterwards a like report was read at a meeting of the Architectural Association. In both of these are many judicious suggestions, and if a code could be drawn up defining the nature of the instructions, and the system to be adopted in the adjudication of the premiums, by which professional men would be guided, and without which, as a guarantee, it should be considered unprofessional for an Architect to engage in them, a great step would be made to a satisfactory solution of the difficulty. As it is, it too often occurs, that the unscrupulous and enterprising are alone successful, and conscientious and eminent men will not engage in competitions, open as they may be to such abuses of erroneous judgment, favoritism, or misrepresentation.

There are two distinct operations in all competitions, the instructions and the selection.

The instructions should define the following particulars :

The nature of the building to be erected.

The extent and class of accommodation required.

A plan of the site for the proposed building, with cross sections of the surface of the area to show the levels.

The sum to be expended upon the building, exclusive of Architect's commission, Clerk of the Works, and like contingencies. It should be stated, whether the amount included heating and ventilating, fittings, or any furniture, or to fit the building for occupation.

The style of art to be adopted, if there be any decided predilection on the part of the Committee.

As to the drawings ; 1st, the number of plans required and if limited, and how mounted.

" " 2nd, the number of sections required and if limited, and how mounted.

" " 3rd, the number of elevations required and if limited, and how mounted.

" " 4th, the number of perspective views and if limited, and how mounted.

The mode in which these drawings should be made out, as to the tints for the plans and sections ; and as to the elevations and perspective views, whether to be shaded, and in what tint.

The mode in which these drawings should be made out, as to the scale for the plans, elevations, and sections. The eighth scale is a good one.

Whether models will be admitted.

Whether to have a motto, or name of a competitor.

When to be sent in.

How to be transmitted, and to whom.

General description of the design, as to the mode of providing the accommodation required, the distribution of the parts, as to the execution, and the materials to be employed; also as to the provisions made for heating and ventilation.

It is to be observed that a *specification* properly so called, at the same time that it imposes a large amount of useless labor upon the competitors, is very unnecessary, and calculated to mislead. A general description will be quite sufficient, and not tend to embarrass the Committee or Judges.

The amounts of the premiums for the two or three best designs, and whether the Author of the first will be employed to execute the work, provided his character and standing in the profession be such as to render him unexceptionable.

On this head the report of the Architectural Association has an admirable suggestion. If the Author of the highest premium be not employed, and his design, however modified, be in the main executed, he should be entitled to have 1 per cent. on the amount of his estimate, to be deducted from the commission of the Architect who executes the building.

State whether the premiated designs are to remain the property of the Committee, or only the first.

As to the Selection of Designs for Adjudication of the Premiums.

State the tribunal and mode of selection.

Upon this head there are great differences among professional men. In some instances, Committees employ one or more Architects, seniors in the profession and non-competitors of course, and in nowise connected with any of the competitors, to ascertain whether the designs be conformable with the instructions. And here a question may arise, if any be not in the *utmost strictness* exactly conformable, whether they be so to such an extent, that may not fairly subject them to exclusion. In one respect, however, no excess should be allowed, and that is in the cost. To ascertain this exactly would involve considerable expense; but a professional man can, in a general way, form a tolerably approximative idea. The responsibility, however, should rest on the candidate himself to fulfil that condition, and satisfy the Committee that his design is within the sum prescribed for the cost of the erection.

So far as to ascertaining conformity with the instructions.

Sometimes the consulting Architect is required to select a certain number, which he may consider the best, and from which the Committee themselves make the final selection. Occasionally the consulting Architect is instructed to award the premiums to the designs in his opinion most meritorious.

A scheme in a recent instance of competition was to allow the competitors themselves to select the designs and award the premiums. But this is a most fallacious proceeding, and liable to the grossest abuse. It assumes equality of judgment in men of most unequal capacity. It gives rise to the exercise of predilections in favour of certain styles of art, and all of one school might be carried away by the mere merit of adopting a particular period of art or a peculiar taste. Many might send in inferior designs to have the vote, and award it to some favorite without reference to his relative merit.

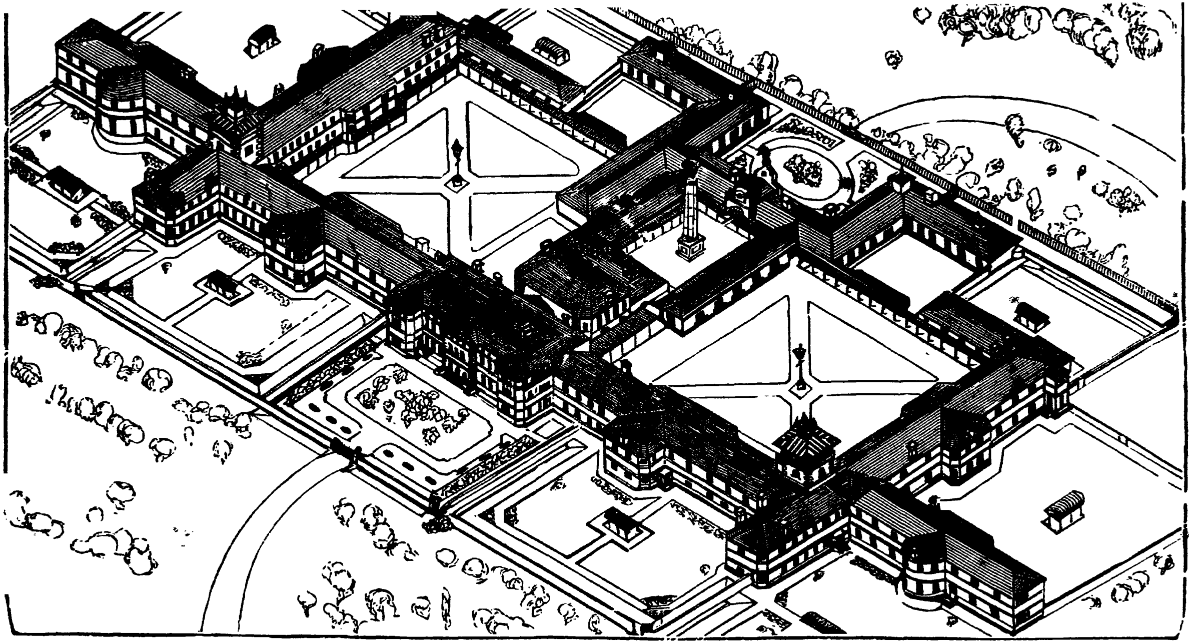
And the question of giving a motto only and excluding the names of the Authors of the designs is of little consequence, as the style and handling of the leading competitors are generally so well known, as to defy concealment of authorship.

The public exhibition of the designs, both before and after selection, seems desirable; as the more the relative merits of the designs are discussed, the more easy it may be for a Committee to form their judgment, though it must be allowed, that this may sometimes afford the opportunity to attempt to mislead the public mind.

It may be expedient for the intending competitors to ascertain, as suggested in the Report of the R. I. B. A.,

Whether any designs have been laid before the parties previously to the competition having been proposed;

And whether any professional man in the employ of the parties will be allowed to compete.



Wilts County Lunatic Asylum.

MESSRS. WYATT & BRANDON, ARCHITECTS.

HANDBOOK OF SPECIFICATIONS.

Specification of sundry Works to be done in the Erection of a PAUPER LUNATIC ASYLUM *for the County of Wilts, about to be built in the immediate neighbourhood of Devizes, from the Plans and under the Superintendence of* MESSRS. WYATT *and* BRANDON, *Architects: and erected in the Years* 1849-50.

EXTRACT OF CERTAIN CONDITIONS IN THE CONTRACT.

IT is to be understood that all the works, although parts of the same may be shown on the drawings only, are to be considered as part of the contract, and the value included in the amount of the tender, as though such works had been particularly set forth and described in the specification also; and that such works as are mentioned in the specification only, and not shown upon the drawings, are equally to be included in the tender.

With regard to the drawings, it is to be understood, that wherever the dimensions are marked on the drawings or described in the specification, such dimensions are to be worked from and considered correct, although not exactly corresponding with the admeasurements by scale, which are to be referred to only when the dimensions are not so marked or described on the drawings. Drawings to large scales, and those showing particular parts of the work, are to be taken as more correct than those to smaller scales.

It is also to be understood that the Contractor is to execute the several parts of the work in strict compliance with the working or detail drawings which may from time to time be furnished; provided always, that they are not at variance with the true intent and meaning of the original drawings.

The Architects and the Clerk of the Works acting under them are to have full power and liberty to inspect the materials and manufacture of the various parts of the works at all times during their progress; and, in case of the Contractor refusing to allow such inspection, the work is to be deemed insufficient, and not in accordance with the terms of this specification.

If at any time during the progress of the works, or within twelve calendar months after their completion, any imperfections or insufficient workmanship shall appear, the Contractor is, upon notice in writing being served upon him by the Architects, forthwith to make good the same at his own proper cost and charges; the true intent and meaning of this specification being, that the whole of the works are to be satisfactorily and completely finished, and to be perfect in all their parts.

The Contractor is to take upon himself the entire risk of all accidents—as damage by fire, storm, or otherwise, that may occur during the progress of the works; and to repair and make good the same with as little delay as possible, and at his own proper cost and charge.

If, at any time during the progress or after the completion of the works, any disputes or differences should arise as to the true intent and meaning of any of the drawings or specifications, as to the fair construction of the contract, or as to the measurements or value of any of the works, whether additions or deductions, such disputes or difference of opinion are to be referred and finally settled by the arbitration of the Acting Architect on the part of the County, by an Architect or Surveyor to be named by the Contractor at the time of his signing the contract; and, in the event of their not being able to agree, a third person is to be named as an umpire by the two parties above named, and the award and decision of any two of these three parties is to be final and binding.

As regards the quality of materials and nature of the workmanship, the Acting Architect is to be the judge, unfettered by any power, or reference, or appeal.

Such works as may have to be measured (whether for additions or deductions) will be measured in the usual manner, as allowed by Her Majesty's Commissioners of Works and Buildings, and not by any *local* custom.

No work shall be underlet, or let by task-work, by the Contractor, *except the permission in writing signed by the Surveyor or Architect, and naming the party to whom any work may be underlet,* shall have been *previously obtained.* Failing such permission, the Architect will not include in his quarterly measurement any works so executed.

No foundation shall be laid until notice has been given to the Clerk of the Works, and until the excavation has been examined by him or the Architects. In default of this, *the Contractor will be held responsible for all future settlements, fractures, or other defects in this portion of the work.*

If, after the completion of any portion of the building or at any earlier period, it shall be discovered that the walls are not upright or are out of level, so as to occasion the use of firrings or extra quantity of any material, the expense of such making good shall be borne by the Contractor.

The Contractor will be held responsible for the correct and proper setting out of the work previous to commencing, and will have to make good any errors at his own cost and charge.

EXCAVATOR.

The *surface mould*, included within the whole of the building, to be taken off to a depth of 6 inches, and deposited where directed, within 100 yards of south-entrance doorway. The *superfluous earth* arising from the excavations and well-sinking, to be uniformly spread over the falling ground to the south; but in such a manner that there shall remain a decided fall (sufficient for drainage) from the south front of the building to the south, after the earth has been removed and deposited.

A *well* to be sunk in the court-yard (on male side) at such spot as shall be directed by the Architects. The Contractor will be required to sink it 50 feet from the surface (and to give a price for every fathom of extra depth below the 50 feet; stating *separately* the price for excavating and for steining in brickwork as specified). The extreme diameter for the excavation to be 7 feet 6 inches.

Provide and fix all *shoring, planking, strutting, &c.*, which may be required for the above work, or for any of the excavations required, and provide barrows, carts, and all tackle, gear, &c., that may be required.

Excavate for the several cellars, areas, &c., shown on the drawings to the necessary depths; and for the several foundations, piers, inverts, of the lengths, widths, and depths required for the work.

Fill in and well ram the ground round the several walls as they are brought up.

Clear and cart away, or deposit where directed, all superfluous earth, rubbish, or chippings, which may have accumulated during the progress of the works.

Excavate for the several drains, sewers, or draining-pipes, where shown on the drawings, and properly fill in and ram the ground round them when laid, and also for the rain-water tanks.

Such *concrete* as is shown on the drawings, or which may be ordered to be used by the Architects or Clerk of the Works, to be composed of broken flint and gravel in equal proportions, and well-burned stone lime from Westbrook or Bath, in the proportion of 1 part of lime to 7 parts of flint *and gravel*, to be thoroughly mixed together, and brought, by the addition of water, into a fluid state, when it is to be thrown into the trenches from a height of at least 5 feet, and left to settle, being merely levelled at the last layer. The concrete is only to be mixed in small quantities at a time.

MASON AND BRICKLAYER.

The *drains* to be formed as shown on the basement plans, and of the several descriptions marked thereon. They are to be formed of the glazed stone-ware manufactured either by Messrs. Doulton or Mr. Stiff, or Mr. Potter, of London, or Mr. Bright, of Bristol; to be of the several sizes described on the plans and regulated by the quantity of soil calculated to pass through them. They are to be carefully laid to a true and sufficient fall, and the joints made perfect.

The whole of the *cement* described to be used is to be *Portland cement*, and is to be obtained from Messrs. J. B. White and Sons, of Millbank Street, Westminster, whose invoices are to be produced if required by the Architect.

Walls.—The whole of the walls below the ground in foundations to be of Bradford or Murhill stone, laid random walling; the beds and joints being well flushed up with mortar.

Grout.—The *walls* are to be well grouted with liquid grout at *the level of the ground* of the ground-floor window-sill, of the string between the windows, and at the level of the wall-plate.

Cement Course.—At the level of 6 inches below the bottom of the plinth set two courses of brickwork 6 inches high, in Portland cement, in the following proportions—viz., one-third of sand to two-thirds of cement. Care to be taken to break the joints in the most complete manner, the top course being well flushed over.

The *main walling* above the ground level in backing to external walls, and in internal walls (where not shown to be of brick), to be executed with Bradford or Murhill stone random walling, well flushed up with mortar, and *properly bonded.* The internal quoins of doors and window jambs, fire-places, &c., to be formed of this material, being carried up in true and perpendicular manner.

Discharging arches to be turned over all door and window openings to a regular form of centring, and to be executed in 9-inch brickwork, or 18-inch stonework (where there is no room for the latter depth of arch under the plates, 9-inch brick arches to be turned.) Over all doorways not shown to be arched the discharging arches are to be turned clear of the lintels; over all the windows they are to be so turned as that no lintels will be required.

Trimmers.—Turn half-brick *trimmers* for all fire-places and slabs.

Bedding.—Properly *bed* all plates, templates, &c.

Pointing.—Properly set and point up all door and window-frames, &c.

Inverts.—Form 18-inch *inverted arches* in stonework, or 14-inch arches in brickwork, under the three openings in principal south entrance, to be turned to a proper trammel the whole thickness of the walls, and to a radius of at least 4 feet.

Turn *inverted semicircular arches* the whole thickness of the walls, under those openings shown in the tower walls, and similar discharging arches over all these openings.

Turn *inverted arches* under all the Venetian windows shown throughout the building, and discharging arches over, as described.

The *two towers* to stand on a bed of concrete, 4 feet deep, extending 12 inches all round, beyond the outside line of bottom footing. (*See* Drawing No. 12.)

The *plinth* throughout the whole of the southern and principal front, extending from the northern angle of the infirmary on the male side, to the similar point on *female* side, to be 2 feet high above the ground, in not more than two courses in height, and of a thickness covering 8 inches; to be set perfectly horizontally, the joints being worked through the whole thickness of the stone, and being formed invariably at right angles. The top to be chamfered 1½ inch each way, and the face of the plinth to project 2 inches beyond the line of wall above.

The *plinth* round the remaining portion of the *building* to be 12 inches high; all that to buildings more than one story high to average 8 inches in thickness.

The *plinth* to low buildings to be 9 inches high, and to average 6 inches in thickness; in other respects, the whole to be worked as described for the front buildings.

Range Work.—The whole of the *external face* of the outer walls throughout the building, including towers and chimney shafts, to be of Bradford or Murhill stone in *range work;* the courses varying from 4 inches to 8 inches in height, and *averaging* 4½ inches in width or bed, no stone being less than 3 inches in bed. The whole to be set in fine or setting mortar, with such sufficient *number of bond stones* as shall insure perfectly sound and substantial work. The joints to be in all cases truly horizontal and perpendicular, and well filled with mortar.

The *face of the walls* at the termination of the works, or where otherwise directed, to be dragged off to a uniform colour and clean surface.

The *quoin stones* to be of similar stones, *or of Bath stone from* the Comb Down white bed, Farleigh Down or Corsham Down weather bed; the stone in each case being double the length of the adjoining course, or rather being equal in height to the two adjoining courses. No quoin stone to be less than 6 inches thick, and the average thickness to be 9 inches.

The *quoin stones* of the centre south point, and to the two towers, to *be of Bath stone* as above described, and of the several depths and lengths shown in the drawings.

The several *sills,* cornices, string courses, architraves to windows and doors (in centre south front), mullions, key-stones, balconies, and piers and archilvolts, to be of Bath stone (of the quality above described), worked according to the drawings; each stone to be set to its true or quarry bed; the whole to be set and worked in the most perfect manner, and the arris left perfect at the termination of the work. The *architrave* stones to be bonded, as shown in drawing, and in each case to be secured with a slate dowel properly set in cement.

The *cantilevers* of cornice under *pediment* of *centre* portion of south front, to be of Bath stone cut to correspond with the wooden cantalivers of the remainder of cornice to this front.

The *piers and pierced parapets* and the balls shown on the towers to be of Bath stone; to be carried by a cast-iron kerb (as shown on drawing), having in each angle and centre supports to carry those portions.

The *piers and plinth* to be 5 inches thick, the intermediate pierced ashlaring to be 3 inches thick. The whole to be properly cramped together with copper cramps.

PAVIOR.

Paving.—The basement under centre building, and the clerk's store to the east of kitchen court and the areas (where shown by a grey tint) is to be paved with Yorkshire, Forest of Dean or Hannam stone paving, 2½ inches thick, roughly tooled or bunched on face; to be laid in square and even courses, well bedded in mortar on dry rubbish or lime core well levelled and rammed.

The remainder of the basement to be paved with Attworth stone (corn-grit bed) paving or *Welsh bunched paving*, 2½ inches thick, well bedded in mortar as above described.

The whole of this paving to be laid to a uniform fall towards such gratings as may be necessary to carry off water after washing, &c.; communicating with the drains or small cesspools, if there are no soil drains near.

Portico, Porches, Covered Ways.—The paving of the portico, the porches, and the covered ways, as shown by a grey tint on the ground plan, to be paved with York, Hannam, or Forest of Dean, or Welsh paving, of uniform colour and thickness (not less than 2½ inches), laid in square and even courses, and well bedded, as before described, in mortar on dry rubbish, or chippings, or lime core well levelled and rammed. The portico to be *neatly tooled* on face, the covered ways and porches to be roughly tooled or bunched.

Steps.—Provide and fix in all the outer doorways solid Forest of Dean, York, Hannam, or Welsh stone steps, 12 inches × 6 inches. (These steps must be of the same quality of stone as that selected for the paving, so as to harmonize in colour and material); to be solidly bedded on stonework, to be 6 inches longer in each case than the respective doorways, and to be securely pinned into the walls at each end. The face of the riser and tread to be neatly tooled.

The *blocks* shown as terminations to the steps are to be of Bath stone, ranging with top of plinth, *and to be solid*, to be weathered on top, and to be well bedded on solid masonry.

The *kerbs* to the several areas to be of solid *hard stone* 9 inches × 6 inches, *corresponding in colour, and quality, and workmanship with the steps;* and to be set in long lengths on solid masonry, the joints to be joggled; form rebate for the iron grating.

Holes.—Cut all necessary holes for iron railing, standard, &c., both in the kerbs and solid stone steps of staircases.

The *kerb* in the inside of paving of covered ways to be 8 inches × 5 inches, securely fixed between plinths under column, to be of hard stone corresponding with pavement, well bedded, roughly tooled on face and edge, and to be back-jointed for paving, and the top to be kept at a height of 3 inches above ground in yard.

The *plinth* under column to be 12 inches square and 6 inches thick, bedded solidly upon a rough stone pier, to be roughly tooled on top and front to correspond with work to pavings, the back and sides to be properly squared and worked for the kerb and paving.

The *plinths* under 5 large columns, which carry the upper story over covered ways, to be 18 inches square and 6 inches thick, bedded on brick piers 18 inches square, with 2 courses of footings all round; these piers to be laid on concrete 3 feet deep and 1 foot all round beyond the outer line of footings.

The following *Paving* will be required for the ground-floor.

The *vestibule* between centre building and kitchen, the serving-room, the larder, the kitchens, and scullery, and bread-room; these portions and the clerk's store to be of York, Forest of Dean, or Hannam stone, 2½ inches thick, laid in square and even courses on concrete where there are vaults underneath, and on dry rubbish or chipping well rammed in the other cases, to be laid to a proper current, and well pointed in mortar.

The remainder of the outbuilding, one story high (tinted grey on plan), to be paved with the Attworth (corn-grit bed) paving stone or Welsh bunched paving, 2½ inches to 3 inches thick, roughly tooled on face; to be laid to a proper current and bedded in mortar, or dry rubbish, and chippings well rammed, to be properly jointed in mortar.

Drain-gratings.—Provide for and insert in all areas one draining grating (to be provided by Smith).

Stone Staircases.—The principal staircase; staircase to governor's residence and to matron's rooms; the two tower staircases in patients' departments, and the several staircases to the basement and to the heating-apparatus rooms, to be of stone as hereafter described.

The five first-mentioned staircases to be of York, Forest of Dean, or Hannam *solid* stone, 12 inches × 6 inches, tailed into the walls a distance of at least 9 inches, to be properly pinned in and bedded on *solid* stone or brick. The projection of the steps from the face of the walls to be taken from the plans. The face of the risers and treads to be neatly tooled. Cut the necessary holes for balusters, railing, &c. The centre flight of principal staircase to be carried on cast-iron carriages of sufficient strength cast to receive the ends of steps (two of these flights will have to be thus carried), the underside of steps to be tooled.

The *tower staircases*, which in each case will be between two walls, are to have the steps walled in as the work proceeds, each step to bed not less than 4½ inches on the wall, and to be properly pinned in, the face of the risers and treads to be carefully protected during the progress of the works.

Landing.—Provide and fix 6-inch quarter spaces, and 4-inch landings where necessary for the staircases.

Basement Staircases.—The 3 internal staircases to basement, and the two external ditto to heating apparatus, to be of solid York or Welsh stone, tailed into the walls or supported at both ends as before described (in each of these cases they may be supported at both ends by spandril walls), the tread and riser to be roughly tooled or bunched. Cut all necessary holes for the iron railing, balusters, &c. The steps to be 10 inches × 7 inches.

Hard-stone Course.—Provide and fix throughout the building, where fire-proof construction is used, at the level *of the bedding* of the joists, a *hard-stone course* 3 inches deep, and lying 12 inches on the stone walls, 9 inches on brick walls.

Door Templates.—Provide and fix under the solid door-frames in internal walls (viz.: those of all the cells, dormitories, and day-rooms) templates of hard-tooled stone, 12 inches square, and cut mortices in them for the posts.

Fire-places.—Provide and fix all the necessary hearths, and back hearths of York, Forest of Dean, or Hannam stone securely bedded.

Provide and fix throughout the Asylum department, where shown, hard-stone plain chimney-pieces with 3-inch mantel and jambs, of the value of 1*l.* 10*s.* each when fixed.

In the central front building, the sum of 5*l.* to be allowed for the chimney-pieces in each of the following rooms—viz., board-room, superintendent's dining-room and drawing-room; of the value of 3*l.* 10*s.* in the superintendent's office and library, and in the matron's parlour.

The remainder of these chimney-pieces to be of the value of 1*l.* 1 *s.* each, fixed.

The sum of 5*l.* to be allowed for a hard-stone chimney-piece in the kitchen; 2*l.* for that in servants' hall and in scullery. The sum of 1*l.* 10*s.* each for the 6 fire-places in the centre back building or lodge.

Rain-water Tanks. — The two rain-water tanks shown in yards to be 12 feet long by 8 feet wide, and 5 feet deep from springing (to be of these dimensions in *the clear*). The walls to be of stone 18 inches thick, well filled in and rammed at back; the inside to be built with ½ brick set in Portland cement, and rendered in the inside with this cement ½ inch thick. The bottoms to be roughly paved, bedded, and jointed in cement. Turn

9-inch brick or 18-inch stone arches (to a sufficient rise) over these tanks, and insert in each one paving stone for manhole, 2 feet square, with strong iron ring. The several drains, shown by blue lines on basement plans, to be laid into these tanks, which are to be executed at such a depth below the ground as will admit of a sufficient fall for the several lengths of drains leading into them. Each tank to be provided with an overflow drain laid into the nearest soil drain.

Drain Traps.—The whole of the drains to be trapped with cast-iron traps of an approved description. The several rain-water pipes to have 9-inch brick funnels, in cement, at their base.

Bricks.—The whole of the bricks to be sound hard-burnt stock-bricks from the Devizes, Cheverill, or Larrington fields.

The *mortar* for the *building* to be composed of Westbrook, Bath, or *other stone lime* of approved quality, mixed in the proportion of 2 parts *sand* or road grit to 1 part lime. The whole to be properly mixed in a pug mill.

The *mortar* for the brick walls to be of chalk lime, and the green sand of the site, mixed in such proportions as shall be approved by the Architects.

The *flues* to be of brickwork, to the furnaces, to the kitchen and scullery fire-places 18 inches square, and to all other fire-places 9 inches × 14 inches, properly cored and pargetted.

WORKS IN CONNEXION WITH THE FIRE-PROOF CONSTRUCTION.

The *cast-iron joists* to be fixed, as shown on plans, 18 inches apart, bedded upon the course of paving described in the Mason's work.

Joists.—Lay crosswise upon the flanches of the joists stout laths about 1 inch square and ½ inch apart. These may be of any rough material, first cut to the length, about 17 inches, and then rent to the size.

Composition for Floors.—*A coat of mortar*, inch thick, to be spread over these laths, and well pressed down between them to form a key for the ceiling below. This mortar to be composed of one part of lime to three of coal-ashes or sand (what is commonly called rendering).

A *coat of concrete* to be then laid on in a moist state and well trodden in. The concrete to be 5 inches thick, except in such parts as there are no rooms, &c., under, where it may be only 3 inches thick, and to be made, in both cases, of road-grit, baked earth, or burnt ballast, mixed with coal ashes and stone lime, or of fine ballast or gravel, mixed with stone lime in the proportion of 10 to 1.

Where the floor is to be of wood, the joists are to be imbedded half their depth in the concrete.

In the other parts, the finished floor is to be formed of a composition ¾ inck thick, composed of sand 80 parts, stone lime 32 parts, ochre 2 parts. The composition to be well mixed, laid on in one thickness, and well trowelled to prevent its cracking and give it a good face, and, when perfectly dry, to receive two coats of linseed oil, put on with a brush as thin as possible.

CARPENTER AND JOINER.

Fir.—The several roofs, floors, partitions, &c., to be framed and fixed in the manner shown on the drawings, with the best Memel, Riga, or Dantzic fir-timber, *perfectly free from sap, shakes, large dead knots, and of the several scantlings shown or described.*

Deals.—The whole of the deals are to be of the best Christiana, perfectly *dry and well seasoned, free from large dead knots, sap, and shakes.*

Oak.—The oak to be of the best English growth, *perfectly sound and well seasoned, cut die-square, free from sap, shakes, or other defects.*

The *scantlings* of the timbers of roofs, floors, &c., are figured in the drawings, and they are to hold these sizes full.

Partitions.—Framed and braced quarter-partitions, where shown on the several plans. The heads, sills, and door-posts 4 inches × 4 inches, braces 4 inches × 3 inches, door-heads 4 inches × 4 inches, quarters 4 inches × 2½ inches.

All those which have not a solid bearing are to be strongly trussed, and to have all requisite wrought-iron straps, bolts, &c.

Centring.—Provide and fix all necessary centring to vaults, arches, apertures, trimmers, &c., trammels for the inverted arches, templates for circular walls, and everything else requisite for the proper execution of the whole of the works. Such of the centring as may be considered desirable is not to be removed till directed by the Clerk of the Works.

Wood Bricks.—Provide and fix the requisite number of wood bricks to fix the Joiner's work to.

Lintels.—Lintels 4 inches thick and of the requisite width, to be fixed over all the doorways in internal walls, and over the windows in walls of attendants' rooms, and to be 12 inches longer than the openings. No wood lintels throughout the building to be fixed over the external openings.

Joists.—The joists to be of the scantlings shown upon the drawings, notched down and spiked to plates 4 inches × 3 inches, except where they lie upon the fire-proof floors, in which cases they are to be 3 inches × 2 inches, and bedded half their depth in the concrete, and will not require plates. (*See* drawings.) All the joists to be properly trimmed for fire-places.

No rafters, quarters, joists, or ceiling joists, to be more than 12 inches apart, and the trimmers are, in all cases, to be $\frac{1}{2}$ inch thicker than the joists.

Roofs.—The wall-plates of roofs to be in long lengths, secured together, when necessary, by scarfs 1 foot long and well spiked.

The *trusses* are to be very carefully framed, as shown on the detailed drawings, with all requisite bolts and straps of the best tough English wrought-iron and cast-iron king-heads, &c. The edges of hips and ridges to be roughly chamfered.

Battening.—The roofs to be covered with $\frac{3}{4}$-inch battening for duchess slating (four cut out of a deal), with $\frac{3}{4}$-inch valley-boards 9 inches wide, and to have tilting fillets at the eaves to the gables, and wherever else required.

Gutters.—The gutters to be of $1\frac{1}{4}$-inch deal on proper fir bearers, framed where requisite, to be 9 inches wide in the narrowest part, with a fall of $1\frac{1}{2}$ inch in 10 feet, and $1\frac{1}{2}$-inch rebated drops not more than 12 feet apart. Inch-framed cesspools, 12 inches square and 4 inches deep, wherever required.

The *flats*, over small octangular lobbies connecting the end wings, to be covered with inch rough boarding, edges shot for lead on joists, 5 inches × 2 inches, and to have 2-inch rounded roll at each angle.

The *brackets* under the eaves of centre building (except the pediment of south front, which will be of stone) are to be of 3-inch deal 6 inches high, wrought and moulded as shown, and built 1 foot into the walls.

The *timbers* of the roofs of chapel and kitchen, which will be seen in consequence of their being ceiled to the rafters, are to be wrought.

The *lanterns* over kitchen and scullery to be framed, as shown, with oak, weathered and throated sill, and fir wrought and framed posts and heads.

Louvres.—The *openings* on two sides to be filled in with $\frac{1}{2}$-inch deal $1\frac{1}{2}$ inch apart in the clear, and, on the other sides, with 2-inch ovolo sashes; the centre one of each being hung on proper sash centres, and with cut and mitred beads round, and proper lines, pulleys, and eyes to open and shut them. The other sashes to be fixed, and a bead mitred round inside.

Similar lanterns to be fixed in the roofs of brewhouse and laundry, but to have louvres in all the openings.

HOUSE DEPARTMENT AND OFFICES, INCLUDING KITCHEN AND CHAPEL.

The *floors*, where tinted yellow, to be of 1¼-inch yellow deal battens, laid straight-joint, with splayed headings, and to have 3 inch mitred and glued margins to the hearth slabs.

The *doors* of the kitchen, scullery, and larder, to be of 1½-inch deal bead flush and square, hung with 4-inch butts in 1¼-inch rebated jambs, rounded and grooved for the plastering on one side, and with a double-chamfered fillet round on the other; 6-inch iron rim locks to these doors. No. 5 of these.

The other doors to be inch-ledged and beaded, hung with 24-inch cross-garnets, in fir rebated frames, and to have 8-inch stock locks. No. 5 of these.

The *centre-entrance door* to be of 2½-inch deal, in 6 panels, moulded both sides, and the panels raised on the outside, hung with 1½ pair 4-inch butts, in proper fir doorcase, 5 inches × 4 inches, with circular heads, proper transom, and 2-inch ovolo fixed fanlight. A moulding round the inside, to cover the joint of plastering.

The two other front doors to be similar in all respects, except that the panels are not to be raised, and that they are not to have fanlights.

A strong 8-inch drawback and spring lock, a barrel-chain and two 12-inch barrel-bolts to each door.

Back Doors.—The 4 doors from passage, &c., to covered way, and the one from kitchen to ditto, to be of 2-inch deal, bead flush and square, hung with 4-inch butts in proper door-frames, 5 inches × 4 inches, with transoms and 2-inch ovolo fanlights, except to the kitchen door. Two of these fanlights to be hung on centres, with lines, pulleys, &c.; the others to be fixed. A strong 8-inch drawback lock, and two 12-inch barrel-bolts to each.

Ground Floors.—Internal Doors to Rooms.—The doors of all the rooms, &c., in the house, to be of 2-inch deal, in 6 panels, moulded both sides, hung with 4-inch butts, in 1¼-inch double-rebated jambs, with inch framed beaded and grooved grounds and moulding, to form architraves, 5 inches wide, and chamfered blocks 9 inches high. Eight of these doors to have knees to the architraves and a deal-moulded cornice on one side, as shown in drawing. Good 7-inch mortice locks and brass furniture to these doors.

The *doors* of the 2 *water-closets,* and that of closet from surgery, to be of 1½-inch deal, moulded and square, hung with 3½-inch butts in 1¼-inch rebated jambs, rounded and grooved for the plastering on one side, and with a moulding round on the rebated side.

The water-closet doors to have brass pulpit latches and 4-inch brass barrel-bolts. The closet from surgery a 6-inch iron rim lock.

The *doors of the offices*—as the kitchen, scullery, bread-store, servants' hall, larder, and cook's store—to be of 2-inch deal, in 4 panels, bead-flush and square, hung with 4-inch butts in 1½-inch rebated and rounded jambs, grooved for the plastering on one side, and with a double chamfered fillet round on the rebated side.

Strong 7-inch iron rim 3 bolt-locks, and strong brass furniture.

House.—The *doors of all the rooms* of the house to be exactly similar to those described for the ground-floor, except those of water-closets and store-closets next staircase, which are to be similar to those described for the ground-floor water-closets.

The *door to chapel* to be of 2-inch deal, folding, 6 panels in each leaf, hung in jambs similar to the doors of the house, and to have plain pilasters 6 inches wide, with frieze and moulded cornice, as shown on the side next the chapel.

A strong 7-inch mortice lock, with brass furniture, and a 12 and 24-inch brass flush-bolt, and blank furniture to the other leaf.

Second Floor.—The doors of all the rooms, closets, &c., to be of 1½-inch deal, in 4 panels, square both sides, hung with 3½-inch butts in 1¼-inch rebated, rounded, and grooved jambs, with moulding round to cover the plastering on the rebated side.

Good 6-inch iron rim 3 bolt locks, to the rooms, 4-inch dead locks to the closets, and brass pulpit latches, with private bolt, to the water-closets.

The *windows in basement*—as kitchen, scullery, and larder—to have deal-cased frames, oak-sunk sills, and 1½-inch ovolo sashes, single hung, hung with patent lines, brass pulleys, and cast-iron weights.

A strong brass sash fastening to each.

Inch tongued and rounded window-boards and bearers.

Solid Frames and Casement Sashes.—The other windows to have solid wrought and rebated frames, 4 inches × 4 inches, with oak-sunk sills and 1½-inch casement-sashes, folding, one leaf of each hung with 2½-inch butts, and to have an iron water-bar and strong fastening, and a hook-and-eye to keep the casement open.

The *borrowed lights* to have 1½-inch ovolo sashes, fixed in inch rebated and double-beaded lining.

Ground-floor. — The *windows* of the house-building to have deal-cased frames, oak-sunk and weathered sills, and 2-inch ovolo sashes, double hung with brass axle-pulleys, patent lines, cast-iron weights, and brass spring sash fastenings to each window.

Shutters to Front Rooms.—The windows in board-room, superintendent's and porters' rooms, to have splayed boxing-shutters, the fronts of 1½-inch deal moulded and bead-butt, 2 panels high, the back flaps of 1¼-inch brace-butt, and square, prepared and hung for cutting, 1¼-inch framed, rebated and beaded grounds to form boxing, grooved for the plastering, and a moulding round to form an architrave similar to that of the doors.

One-and-a-quarter-inch moulded backs, elbows, and soffit, with beaded cappings, elbow caps, clearing pieces for blinds, &c. The front shutters to be hung with 1½ pair 2½-inch butts, the back flaps with 1½-inch back-flap hinges, and to have brass shutter knobs, and 18-inch spring shutter-bars.

The back linings to be of cement.

All the other windows to have narrow tongued and rounded window-boards, the linings and window-backs being of cement.

The *borrowed light* to closet next surgery to have 1½-inch deal ovolo sash, in 1¼-inch rebated and beaded lining, grooved for the plastering outside, and with a moulded-round inside.

The *windows in kitchen*, bread-store, servants' hall, larder, cook's store, and corridor to kitchen, to have deal-cased frames and 2-inch sashes, as before described, and narrow-tongued and rounded window-boards.

First Floor.—The windows of the house, chapel, staircase, &c., to have deal-cased frames, and 2-inch sashes, as before described, and cement-linings and backs, except those of the governor's dining and drawing-room, and study, which are to have inch-deal linings, and soffit tongued to the frames, and inch-framed and beaded grounds, with moulding blocks, &c., to form architraves similar to those of the doors. 1¼-inch deal moulded backs to these windows.

Second Floor.—The windows to have deal-cased frames, and 1½-inch ovolo sashes, as before described, and narrow-tongued and rounded window-boards.

The *span skylight* over centre passage, first floor, to be of 2½-inch deal, with moulded bars, 2½ inches wide, lying upon 1½-inch wrought staff-beaded, grooved, and chamfered kerbs, 12 inches wide, and wrought double-rebated and moulded ridge, 9 inches ×

3 inches, covered with a sunk grooved and double-chamfered capping.

Fix wrought and staff-beaded bearers, 6 inches × 2 inches, against the wall, to carry the skylight.

House.—The *staircase*, from first to second floor of the governor's apartments, to have 1¼-inch treads and inch risers, with moulded nosings, housed into 1¼-inch beaded wall strings, and the nosings returned at the ends upon a 1¼-inch cut mitred and staff-beaded outer string, framed into 3-inch turned newels, and the whole properly blocked and glued, and with fir carriages.

Inch deal bar balusters, two to each step, dovetailed to steps, and wainscot moulded handrail, 3 inches × 2 inches, with turned caps on newels, and all necessary ramps, screws, &c.

Inch staff-beaded fascia to landing, with moulded nosing.

Similar fascia and moulding to be fixed to the landings of the other staircases, which are to be formed of the fire-proof materials, and round the well-hole, in centre of passage of house, on the first floor.

Handrails.—Similar wainscot handrails to the stone staircases in the house, and round the well-hole in passage, first floor, with proper ramps and wreaths, and screwed to the wrought-iron cove.

The *water-closet* next magistrate's entrance to have inch Honduras mahogany seat and riser, on proper framed bearers, and inch mahogany clamped flap and beaded frame, with moulded nosing tongued in. The flap to be hung with 3-inch brass butts, proper hole for basin, and beaded ditto for pull.

Fix ½-inch mahogany torus skirting, 6 inches high, round the seat, and deal beaded casings to pipes, as before described.

The other water-closets in house to have similar seats, risers, and flaps, but of very clean deal, instead of mahogany.

Cisterns.—Fix in the roof of the house, over the stacks of closets, two cisterns, each 5 feet 10 inches × 3 feet, and 2 feet 6 inches deep; the bottom of 1½ inch deal, wrought one side and cross-tongued, the rims similar and dovetailed at the angles.

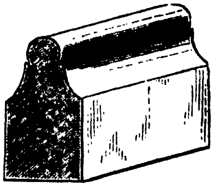
Provide 2 wrought bearers, 6 inches by 3 inches, to carry each.

Trap Door.—Trim the ceiling for, and provide and fix a 1¼-inch square-framed trap door, 2 feet square, hung with 2½-inch butts, in a rebated, beaded, and grooved lining, 4¼ inches wide.

Cistern.—Provide and fix in the water-closets, near the board-room, a cistern, 4 feet × 2 feet 6 inches, and 2 feet deep, framed as above described, but of 1¼ inch deal, and fixed 1 foot below the ceiling on wrought bearers, secured to the wall and partition. Enclose the space above the cistern with inch deal framing, with a small door hung with 2-inch brass butts and a brass knob turnbuckle.

Cistern.—Provide and fix in the scullery in basement of the house, a cistern 4 feet × 2 feet 6 inches, and 2 feet deep, framed as that for board-room water-closet.

Chapel.—The *backs of the seats* to be of 2-inch deal bead flush, and chamfered, each 2 panels in length, the stiles only running down below the seats, which are to be of inch deal, 14 inches wide, with rounded edge, supported upon 1¼-inch cut standards, and chamfered bearers at the ends. The ends of the seats next the passage to be of 2-inch deal in one panel, bead flush inside and stop chamfered outside, and framed into the floor. The backs and ends to have a moulded capping, partly worked on the framing as sketch, and to 2 feet 9 inches high from the floor.



Fill in below the seats with ¾-inch matched and beaded both sides boarding, nailed to the bottom rail of the back and to a chamfered fillet on the floor.

Fix ¾-inch bookboards, 6 inches wide, with rounded edge on cut brackets, and round the corners of both bookboards and seats.

Provide for the *pulpit, desk,* and *table,* the sum of 10*l.*

ASYLUM DEPARTMENT.

Floors.—The floors on ground and first floors, where tinted yellow on the plans, to be of 1¼-inch yellow deal battens, perfectly dry and well-seasoned, laid folding.

Doors, Basement.—The doors from areas to basement, adjoining hot-air apparatus, to be of 2-inch deals in 6 panels, bead, flush and square (the 2 upper panels glazed with rough plate-glass), hung with 4-inch butts, in proper fir rebated and beaded frames, 4 inches × 4 inches, and to have good 8-inch drawback locks, and there will be No. 2 of them required.

The doors to coal-cellars and stokers' rooms to be inch ledged and beaded doors, hung with 24-inch cross garnets, in fir rebated frames, 4 inches × 4 inches, and to have 8-inch stock locks. There will be No. 5 of these required, and all these doors to be 3 feet 3 inches × 6 feet 6 inches.

Ground and First-floor External Doors.—The external doors to be of 2½-inch deal, in 6 panels, bead, flush outside and beaded inside, hung with 1½ pair 5-inch wrought-iron butts, in fir proper door cases, 5 inches × 4 inches, beaded and grooved for the plastering.

Those which have fanlights to have proper double-rebated and beaded transoms, 5 inches × 4 inches, and 2-inch ovolo fanlights, hung on centres, with lines, pulleys, &c., to open and shut them.

Strong 8-inch drawback and spring locks to these doors, and two 12-inch barrel-bolts.

Two of these doors, viz., from lobbies of principal staircases to the covered passages, are to have the 4 upper panels open for and glazed with rough plate-glass, and a sash-bead mitred round inside.

Doors of Cells.—The doors of all the cells (except of noisy patients described below) to be of 2½-inch deal framed, in 4 panels, bead flush on one side and beaded on the other, the panels of 1½-inch stuff, hung with 4-inch wrought-iron butts, in fir rebated and treble-beaded frames, 4 inches × 4 inches, grooved for the plastering and for the compo linings.

Noisy Cells.—The doors of cells for noisy patients (No. 12 in all) to be similar generally, but of 2½-inch deal, and with solid panels. Fix on each of the cell-doors a lock, which will be provided, and an inspection plate in those for noisy patients only.

Dormitories and Day Rooms.—The doors of dormitories and day rooms to be similar to those of cells generally, but 3 feet wide. Fix only locks, which will be provided, on those of dormitories, and provide and fix 10-inch iron rim, 3-bolt brass knob locks on those of day rooms.

Attendants', Store and Bath-rooms, and Lobbies to Water-closets.—The doors of attendants' rooms, store and bath-rooms, and lobbies to water-closets, to be of 1½-inch deal, in 4 panels, bead, flush and square, hung with 4-inch butts, in 1¼-inch double-rebated jambs, with inch-framed and double-beaded grounds on each side, grooved to receive the plastering. Provide and fix a 7-inch iron rim, 3-bolt brass knob lock on each.

Water-closets.—The doors of water-closets to be of 1¼-inch deal, in 4 panels, bead, flush and square, hung with 3½-inch butts in 1¼-inch rebated and bonded jambs, rounded and grooved for the plastering on the outside, and with inch-frame beaded and grooved grounds, 3 inches wide on the inside. Provide and fix a strong Norfolk latch to each.

Doors to Corridor.—The large entrance doors to corridor to be of 2½-inch deal, folding in 6 panels in each leaf, bead, flush on one side and beaded on the other, hung with 3 pairs of 4-inch butts in 1¼-inch double rebated jambs, with semicircular head, and inch-framed and double-beaded grounds, on each side grooved for the plastering (the grounds are not to run below the top of cement skirting), proper rebated and beaded transoms, 4 inches × 5 inches, and cast-iron fanlights (which will be provided) hung with

3-inch butts, and to have pulleys and lines for opening and closing them. No. 19 of these doors. (*See* Drawing No. 8.)

The other doors into the corridors to be single, 4 feet × 7 feet, framed in a similar manner, and with similar jambs, &c., but not to have fanlights. No. 10 of these doors.

Locks.—Fix on four of these doors locks, which will be supplied, and on the others strong 10-inch rim 3-bolt locks, and a 12-inch and 24-inch iron barrel bolt to the first leaf of each of them.

All the *windows* to have deal-cased frames, oak-sunk sills, and cast-iron sashes, double hung with patent lines, brass axle pulleys, and cast-iron weights. The fitting and hanging only of the cast-iron sashes is to be included in the estimate, as they will be supplied to the Contractor upon the site.

The *sash-fastenings* will also be supplied, but they must be fixed by the Contractor, and will require each No. 4 holes drilled in the iron sash, and No. 4-inch screws.

The windows in corridors to have inch-deal rounded window-boards and bearers grooved for the plastering of the backs.

N.B.—In all the Venetian windows throughout the building the sashes of the centre light only are to be hung.

The *windows* from the attendants' rooms into the corridors to have deal-cased frames, and 1½-inch ovolo sashes, single-hung brass sash-fastenings, and inch-tongued rounded and grooved linings, and double-rounded and grooved window-boards to serve as cells.

Basement.—The windows in rooms, &c., for warming apparatus, to have solid frames and casement sashes, as described for those in the cellars of house buildings.

The *staircases* in end, or infirmary, building to have 1¼-inch treads and inch risers, with moulded nosings, into 1¼-inch beaded wall-strings, and 1½-inch sunk and staff-beaded outer string, framed into deal-turned newels, 3½ inches square, and with strong carriages, and properly blocked and glued.

The *balusters* to be of wrought iron, inch square, 5 inches apart, with strapped ends. Wainscot-moulded hand rail, 3 inches × 2 inches, with turned caps on newels, and proper ramps. A fascia and nosing to the landing, as before described, and similar iron balusters and wainscot handrail.

Similar *wainscot handrails* to be fixed on cast-iron brackets to the tower central staircases from ground to first floor.

All the *water-closets* in Asylum to have inch clean deal seats and risers, on proper bearers, with rounded nosings and ½-inch square skirting, 4½ inches wide round the seats (no flaps). A proper rounded hole in seat—the carpenter to assist the plumber in fixing the requisite apparatus to make the closets self-acting, as hereafter described—¾-inch beaded casings to the pipes fixed to proper grounds.

Similar seats and risers to the closets in the outbuildings, and in basement of house, except that they are to have inch-framed and beaded frames, and clamped flaps, hung with 2½-inch brass butts.

OUTBUILDINGS.

The *windows* in cellars to have solid frames and casement-sashes, similar to those described for the basement of the house department.

Those on ground-floor to have similar frames and casements, with inch-deal rounded window-boards.

All the *external doors* to be of 2-inch deal, in 4 panels, bead, flush and square, hung with 4-inch butts, in solid rebated and beaded frames, 4 inches × 4 inches, grooved and beaded; to stop the plastering in all the rooms, &c., where the walls plastered.

A strong Norfolk *latch*, and two 9-inch barrel-bolts to each.

The *internal doors* to be of 1½-inch deals, square framed, in 4 panels, hung with 4-inch butts, in 1¼-inch rebated, beaded, and grooved jambs, with a double chamfered fillet round on the rebated side to cover the joint of plastering.

Six-inch iron rim 3-bolt *locks* to these doors.

The *back-entrance gates* to be framed of 2½-inch deal, in one panel, each leaf stop chamfered and divided into small square panels, by 1½-inch stiles, and rails 3 inches wide; also stop chamfered, and with a cast-iron octangular-headed nail in each intersection; the whole to be covered on the inside with 1½-inch battens, ploughed and tongued and beaded both sides, and screwed to the framing.

A rebated and moulded capping on the top of the gate.

Frame a *wicket-gate* in one leaf, hung with 4-inch butts, and to have a strong Norfolk latch and strong 6-inch dead lock.

Hang the gates with strong wrought-iron strap hinges, 4 feet 6 inches long, with three ¾-inch bolts, and 3 screws in each, to hooks properly let into stones built in the jambs, and run with lead.

Provide and fix a cast-iron *gate-stop*, let into a large stone, a 12-inch strong barrel-bolt to each leaf, and a wrought-iron swing-bar, fastening 5 feet long on plate, with folding end and staple on plate, and a strong solid brass-warded padlock and key.

GENERALLY.

The *floor boards* to be properly seasoned and laid very closely, and should any of the joints open to the extent of ⅛th of an inch before the completion of the building, such of them as may be required by the Architects are to be taken up and relaid by and at the expense of the Contractor.

The *whole of the joiner's* work to be very carefully framed and put together, all joints of panels, &c., being cross-tongued, and to be left in a perfect state at the completion of the building. Should any of the joints open, panels wind or split, or any other defects appear, they must be thoroughly made good to the satisfaction of the Architects.

All *door-frames* to be tenoned into the stone templates, or sills, on which they stand, and to be secured to the walls by hoop-iron nailed to the head and built in.

All *fillets*, beads, groovings, &c., necessary for the proper execution of the works are to be provided, although not specially described.

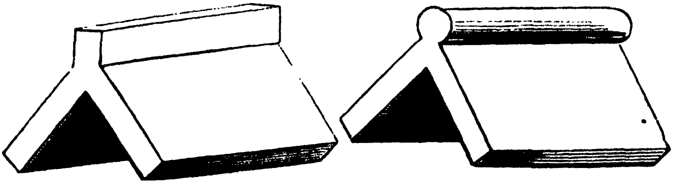
All the *ironmongery to be of the best description of the several kinds described, and to be fixed with all necessary screws, &c., and to be submitted for the Architect's approval previous to being fixed.*

All *jambs and linings* of openings in wall, more than 14 inches thick, are to be framed in 5 panels, the set to correspond with the respective doors.

SLATER.

The *whole of the roofs* to be covered with strong Bangor duchess slating on battening laid with a 3-inch lap, and each slate secured with two copper nails. The bottom course at the eaves to be cut close at all the hips and valleys, and properly tilted where required.

All the *hips and ridges* to be covered with solid slate ridging



with a square fillet or roll on the top, bedded in hair mortar, and the joints pointed with proper oil-slate cement; those on the hips to be secured with copper screws where requisite, and properly jointed at the intersections with the ridges.

Slab-Slate Covering.—The open corridors at the back of the main building and round the kitchen court to be covered with Bangor slab-slates, ¾-inch thick, with sawn faces and edges pinned into a groove in the wall, and lying upon an iron tye-bar, resting upon the columns, and each slate secured with two copper screws.

The *joints* to be covered with fillets of ½-inch slate, 3 inches wide, bedded in oil cement.

Cover the water-closets in basement of house building with slab-slate.

Run Portland cement fillets upon the slate roof of covered way where it stops against walls.

Provide and fix inch-rubbed *slate sills*, as wide as the thickness of the finished wall, to all the doorways, where wood floors meet the composition fire-proof ditto so as to break the joint. The edges of these sills to be sawn.

Similar slate, 6 inches wide, to connect the wood floors of large recesses with the composition floors of the main corridors, all to be bedded in cement.

Four Cisterns of Slab Slate.—Provide and fix in each of the towers for ventilation a slab-slate cistern, 11 feet × 5 feet 6 inches and 8 feet deep, to supply the water-closets and baths of the asylum department; one over the corridor leading to the chapel, 10 feet × 7 feet and 5 feet deep, to supply the kitchen department; and one, 10 feet × by 7 feet and 2 feet 6 inches deep, to supply the boiler for washing department.

All the *cisterns* to have 2-inch bottoms and 1½-inch sides, properly grooved and framed together, and secured with bolts, plates, screws, &c., and put together with oil cement, and made perfectly water-tight, and each to have two galvanized iron tie-rods, ¾-inch diameter, across them, with heads, screw-ends, nuts, and washers complete.

Cut the requisite holes for pipes, &c.

Provide under each of these cisterns No. 4 oak wrought-bearers, 8 inches × 4 inches, lying 12 inches upon the wall at each end, on a course of hard paving stone 1 feet 6 inches wide.

All the *slating* to be left perfect and whole at the completion of the works.

N.B.—It is desirable to provide a large quantity of *slate shelving* for all the offices, closets, and other places where proper to be introduced.—T .L. D.

SMITH AND FOUNDER.

Eaves' Gutters.—Provide and fix to the eaves of all the roofs, (except the buildings at back, only one story high) cast iron-moulded gutters, as shown in drawings, No. 7, securely fixed to the rafters by screws or brackets.

The *gutters* to be cast in lengths of not less than 6 feet, and to have 2-inch lapping-joints, put together with red lead and secured with 2 screws, and to have solid angles and ends, and proper sockets into the rain-water pipe-heads. The whole to be laid to such a fall as may be necessary to carry off the water.

Provide and fix to the buildings, one story high, 4-inch cast-iron semicircular eaves' gutters properly fixed on brackets.

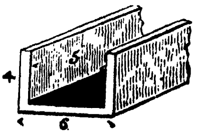
The *rain-water pipes* to be of cast-iron, 3 inches clear diameter, securely fixed to the walls, and to have large moulded heads, of approved pattern, with overflow spouts, and proper shoes laid into the drain-pipes, and an elbow to follow the projection of the plinth.

The pipe, from the lower roof over principal staircase, to be carried down in a chase built in the internal wall to receive it —8-inch chase, each side pipe, 5 inches clear diameter.

Fixing only of Columns, &c.—The Contractor is to fix the cast-iron columns and bearers to carry the roof of covered passages, and also the columns and girders under the projecting part of one of the back wings; but the castings themselves, with the bolts, nuts, &c., required will be supplied to him on the wharf at Devizes.

Roof-bolts, Straps, &c.—Provide and fix the cast and wrought-iron work for the trusses of the several roofs, as shown upon the drawings.

Provide two cast-iron socket-frames to carry the stone parapets of centre parts of towers, 5 inches square in clear of the section shown in sketch, and of $\frac{1}{2}$-inch metal.



Provide *cast-iron gratings* for the areas, where shown upon the ground plan, of approved pattern, weighing 10 lbs. to the foot super, lying in a rebate in the stone kerb, and upon cast-iron bearing-bars where required.

Railing round Front Areas.—Provide and fix round the areas, in front of house building, cast-iron ornamental railings, of the value p. c. of *5s.* per foot run, let into the stone kerb and run with lead.

Balusters for Principal Stairs.—Provide and fix to the steps and landings of the stone staircases in the house cast-iron balusters, of approved pattern, value p. c. *2s.* each, let into the stone steps and landings, and rivetted to a wrought-iron core-rail, 1 inch × ⅜ inch, to which the wood handrail is to be fixed; one baluster to each step, and, at a corresponding distance apart on the landings, cast-iron ornamented newels, value p. c. *5s.* each.

Similar balusters, &c., round the well-hole in passage, first floor.

PLASTERER—HOUSE DEPARTMENT AND OFFICES.

Lath, plaster, flote, and set the ceilings and partitions.

Render, flote, and set the walls.

Cement Angles.—Run Portland to all the external angles, and to those of window jambs and soffits, which, as well as the backs, are to be plastered the same as the walls.

Portland cement skirtings, chamfered, to be run round all the rooms and passages, continued round the window recesses, 9 inches high, and projecting ¼ inch before the plastering.

Twice white all the ceilings, and twice color all the walls and partitions.

Plaster, flote, and set the ceilings, to the underside of the sound boarding, for the fire-proof floors.

Plaster cornices, to be run, 12-inch girth, round the drawing-room, and 9-inch girth in the dining-room, and a 3-inch bead and quirks round the study, matron's parlour, the main passage, and the principal staircase.

Lath, plaster, flote, and set the ceiling of chapel to the under side of the rafters.

Walls of Rooms.—Render, flote, and set the walls of all the rooms and closets, including the linings and backs of the windows, except those of dining-room, drawing-room, and study, which are described to be of wood. Run a cement staff-bead, inch diameter, with double quirk at the angles of the window linings, and round the soffit of arch, and square cement angles to the chimney breasts.

The *partitions in the rooms* to be lathed, plastered, floted, and set.

The *walls of all the staircases,* passages, water-closets, the lobby to matron's ditto, the matron's cutting-out room, and the chapel, to be rendered, floted, and set with bastard stucco, including the jambs and backs of windows, and to have inch Portland cement staff-beads at all external angles, as described for the rooms.

The *partitions* to be lathed and stuccoed, as above.

Portland cement skirtings to be run, 9 inches high, ½-inch projection, with chamfered edge, round all the rooms, corridors, passages, stairs, and landings, except to the dining and drawing-rooms, in which run a cement-moulded skirting, 12 inches high.

Cover the walls of chapel with Portland cement all round, to the height of the backs of benches, finished with an inch bead, flush with the plastering.

Twice white all the ceilings and cornices, and twice colour all the walls and partitions, skirtings, &c.

Ground-floor Ceilings.—Plaster, flote, and set the ceilings of the whole of the house department, the passages, corridors, servants' hall, serving-room, larder, and cook's store-room, to the under side of the sound boarding for the fire-proof floors.

Run a plaster cornice, 12-inch girth, in board room, and a 3-inch bead and quirks in the hall and principal passage, staircase, and superintendent's room.

Ceilings of Kitchen, &c.—Lath, plaster, flote, and set the ceilings of kitchen and scullery, of the lantern lights in them, and of the bread-store to the under side of the rafters.

Twice white all the ceilings.

Walls of Kitchen, &c.—Render and set the walls of kitchen, scullery, bread-store, serving-room, servants' hall, larder, and cook's store, including the window backs and linings. Run Portland cement skirting 9 inches, with chamfered top and projecting ¼ inch, round all these rooms.

Cement Skirting.—Run Portland cement chamfered angles to windows.

Walls of House.—Render, flote, and set with trowelled stucco the walls of board room, superintendent's and matron's room, and, with rough or bastard stucco the walls of all the other rooms, &c. in this part of the house, including in both cases the window backs and jambs, where there are no shutters: lath, in addition, the quarter partitions.

Cement Staffbeads.—Run Portland cement staffbead to all external angles, including those of windows and round circular heads of the latter and of the arches in passage, hall, and staircase.

Cement Skirtings.—Run Portland cement chamfered skirtings 12 inches high round all the rooms, passages, &c., and up the stone staircases.

Twice colour all the walls, partitions, &c.

Basement.—The ceilings of kitchen, scullery, larder, and staircase, to be plastered and set to the under side of the fire-proof floor, and whited.

The walls of these rooms to be rendered, set, and coloured, including the jambs and backs of windows.

Run Portland cement skirting 9 inches high round these rooms and up the stairs, and cement chamfered angles at all the external angles.

Twice lime-white the rest of the basement.

ASYLUM DEPARTMENT.

GROUND AND FIRST FLOOR.

Ceilings of Corridors, &c.—Plaster, flote, and set the ceilings of those corridors, recesses, day rooms, and dormitories, over which there is a fire-proof floor to the under side of the sound boarding.

Lath, plaster, flote, and set all the others to the ceiling joists.

Ceilings to Cells.—Plaster and set to the underside of the sound boarding the ceiling of cells, attendants' rooms, bath-rooms, store-rooms, water-closets, and other smaller rooms, where there is a fire-proof floor over, and lath, plaster, and set those which are only one story high and those of first floor.

Walls.—Render and set the whole of the walls, including the jambs, soffits, and backs of windows, and the soffits of all the arched openings.

Cement Jambs to Doorways.—The jambs and soffits of the doorways to the cells, &c., to be of Portland cement finished with an inch staffbead, and a similar staffbead to be run round all the window openings, as shown on detail drawings, and to all external angles of chimney breasts, piers, arches, &c.

Cement Skirting.—Run Portland cement chamfered skirting 4 inches high round all the corridors, cells, &c., projecting $\frac{1}{4}$ inch from the face of the plastering.

OUTBUILDINGS.

The *ceilings* of the rooms, &c. which have wood floors, and of the laundry, to be lathed, plastered, set, and whited, and the walls of the same, except the laundry, to be rendered, set, and twice coloured.

Roman cement *angles* to the plastered rooms and skirtings 6 inches high.

The *walls* of all the other rooms, &c. to be twice lime-whited.

The *soffits* of the eaves of roofs of main buildings to be lathed, plastered, floted, set, and whited.

GENERAL PARTICULARS.

The plasterer to make good any defect in the plastering arising from blisters, damage by workmen, or otherwise, and the whitening and coloring to be done when directed by the Architects.

When the walls, &c., are not to be floted, the internal angles are to be square to a regular face.

The Portland cement to be obtained from Messrs. White and Sons, Milbank, London. Chalk lime for the plastering generally mixed with clean and sharp road drift (which must be washed if required), and good strong hair.

Thickness of Ceiling.—N.B.—The ceilings under the fire-proof floors must be in all cases 1¼ inch thick in order to cover the flanch of the iron joists.

PLUMBER.

Roofs.—Lay all the gutters with 7-lb. cast lead neatly dressed, turned up 6 inches against the walls and 9 inches from the intersection of the gutter and roof; the width and fall of the gutters to be as described in the carpenter's work.

The lead of *gutters,* where turned up against the walls, to be covered by a flashing of 4-lb. lead 6 inches wide, well pointed into a joint of the stonework with cement.

Flashings of 5-lb. lead 12 inches wide, stepped where requisite, to be fixed round all the chimney stacks (small gutters being formed where required), and wherever the slating stops against the walls.

Flashings of 5-lb. lead 12 inches wide, to be fixed round all the lantern lights to the skylights and wherever else required.

Lay all the valleys with 6-lb. lead 18 inches wide.

All the lead to be of proper lengths, and to have laps of at least 4 inches.

Lay flats over the small octangular lobbies connecting the extreme wings with the main building with 7-lb. lead, turned up 6 inches under the slates and dressed round a 2-inch roll at the angles and over the edge of the iron gutter.

The *water-closets* in house to have the best pan closet apparatus and white basins with service boxes, large D traps, and all necessary levers, cranks, valves, wires, &c., complete.

Cisterns.—These closets to be supplied from 2 wood cisterns, 5 feet 10 inches × 3 feet × 2 feet 6 inches deep, fixed in the roof. Line these cisterns with 8-lb. lead bottoms and 6 lb. sides, properly soldered at the angles.

The closet near board room to be supplied from a cistern 4 feet × 2 feet 6 inches and 2 feet deep, placed over it, and lined as above described.

Fix in each of the wood cisterns a 1½-inch washer and waste, with 1½-inch waste-pipe into the trap of nearest closet and trumpet-mouthed standing waste.

Fix inch service from the cisterns to the several closets, and milled soil-pipes 4 inches diameter, of 7-lb. lead, with elbows, bends, and branches where requisite.

All the *water-closets* in the Asylum to have strong glazed earthenware pans and traps in one piece, of approved make, securely fixed, and 5-inch milled soil-pipe of 7-lb. lead, with backs where requisite for fixing, and the necessary elbows and branches.

The *pans* to be from one of the makers named in the specification for the drain pipes.

One stack of *soil-pipes* to the double closets.

Cisterns.—Provide and fix in each closet a cast-iron supply-cistern, with a division to act as a service-box, and the necessary valves, wires, cranks, and levers to make the closets self-acting by means of the door; the first opening of which is to be made to charge the service-boxes, and the second to discharge the water into the basin by means of a ¾-inch pipe. The service-boxes to contain at least 2 gallons each.

Service-pipes.—All these closets to be served from the large slate cisterns in the towers, from which strong inch lead service-pipes are to be fixed, carried to each of the supply cisterns, and to have a ¾-inch Dunn's improved ball valve to each.

Lay on the cold-water service to each of the baths with ¾-inch pipe, from the inch-service to the cisterns in the closets, but no cocks to be included.

Service to Slate Cisterns.—Supply the four slate cisterns from the well by means of strong 2-inch rising main, and fix to each a 2-inch improved ball valve (Dunn's, 46, Cromer Street, Gray's Inn, London).

Cocks.—Also provide and fix, where directed, No. two 2-inch round water-way stop-cocks with lever handles.

Provision.—As the situation of the well is not determined, the estimate is to include 500 feet of 2-inch pipe for the above purposes.

Wastes to ditto.—Fix, in each of the slate cisterns a 3-inch washer and waste, with trumpet-mouthed standing waste, and 2½-inch waste-pipe into the nearest soil or rain-water pipes, and fix proper brass union for service-pipes from these cisterns.

Provide 50 feet of 1¼-inch service-pipe from the cistern over bread-store, and 100 feet from that over corridor to chapel, for the supply of kitchen, scullery, &c.

Services, &c., to Small Cisterns.—Continue the service from the slate cistern, near the chapel, with 1¼-inch pipe to the 2 cisterns over water-closets on second floor of house and to that near board-room, and to a cistern to be fixed in the scullery in basement, which is to be lined as before described, and fix to each a 1¼-inch Dunn's improved ball valve.

Fix a 1½-inch washer and waste to the cisterns in basement, and 1½-inch waste from it into the drain, and proper trumpet-waste into the cistern.

Sink in Scullery of House.—Lay on a ¾-inch service from the cistern to the sink, and fix a ¾-inch bob-cock and boss with lever handle.

Provide and fix a 4-inch brass grate and rim, properly fixed, into the stone sink, and 3-inch waste from it down into the drain.

Water-closet in Basement and Kitchen-court. — The servants' closets in basement to have an earthenware-glazed basin and trap, and to have the water laid on with ½-inch pipe and cock with lever handle.

Similar basin and service to the closet in kitchen-court.

All the *lead* to be of the best quality, perfectly free from sand holes, &c., and to be properly fixed with all requisite pipe and wall-hooks, nails, &c.

The *pipes* to be of proper strengths, all the services being of strong pipe, and the wastes of the middling weight, and all joints to be carefully made.

GLAZIER.

All the *sashes*, including the borrowed lights, fanlights, &c., to be glazed with good second Newcastle or Bristol glass, properly puttied and back puttied into the rebates, and cut at a sufficient distance from the knobs.

The *skylights* over central passage to be glazed with rough plate-glass in single lengths.

The *glass* to be left perfect and clean at the completion of the works.

PAINTER.

Painting.—All the woodwork and ironwork, usually painted both inside and out, to have four coats of good oil-colour, finished of a plain colour, except such parts as are hereafter described.

Staining.—The timbers of roofs of chapel and kitchen to be twice stained with asphaltum staining.

The seats in chapel to be twice stained and varnished.

French Polishing.—The mahogany seats, risers, &c., of board-room water-closets, to be French polished.

Varnishing.—All the other seats, risers, &c., of water-closets, both in house and Asylum, to be twice varnished.

The outside of the front doors of the house department and of the gates at back entrance to be extra grained, in imitation of dark oak, and twice varnished.

Preparation.—All the work to be well knotted and primed, and all nail-holes and other defects closely stopped with putty.

Should any defects appear, arising from blisters, &c., the same must be repaired and brought forward, and the parts they occur upon must have another coat of paint.

GENERAL CLAUSES.

Shed-building.—The Contractor must erect a small shed-building for the use of the Clerk of the Works, about 10 feet by 8 feet in the clear, with fire-place, slated or tiled roof, wood floor, glazed window, with shutters and door, and good lock.

A *desk*, 2 feet 6 inches wide, the whole length of the office, with two drawers and locks, and two stools.

The whole to be cleared away at the completion, and the site levelled.

Money Provision.—Provide for contingencies the sum of 200*l.*, to be applied as may be directed by the Architects, or deducted if not required.

Ironwork. — The cast-iron columns, girders, cantilevers, and binders, required for the covered ways, &c., will be provided and fixed by a separate Contractor for the founder's work only. The iron sashes and joists will also be provided by the founder and delivered to the Contractor for the general work on the site of the building.

Distinct Tender.—A separate amount to be stated in the tender for an additional story upon the back wing on the male side of the building, similar to that on the female side.

A *schedule of prices* for works in additions to, or omissions from, the contract (according to form provided, with the prices filled), is to be delivered with the tender.

FEMALE WING.

Specification of Bricklaying, Flue-works, &c., required for Warming and Ventilating Apparatus.

WARMING APPARATUS.

Air-flues and Drains.—Excavate ground for the fresh-air flues and the warm-air chambers to the depth of 3 feet 6 inches below the basement-floor line. Construct these air-drains (tinted light lake) 4 feet 8 inches × 3 feet 6 inches in the clear, with ½ B sides, and stone or slate top and bottom, and provide and fix a sliding shutter to each, with pulleys, lines, and balance-weights.

Set Boiler.—Cube of work, 12 feet × 6 feet, 800 fire-bricks, 8 cwt. of clay, and 3 Stourbridge lumps, 30 inches × 10 inches × 6 inches. Construct smoke-flue, shown on plan, build warm-air chambers, 500 feet superficial of 9-inch work.

Lay on water to supply apparatus with ¾-inch service-pipe and ball cock. Provide about 15 feet of 1-inch lead pipe for syphon, &c.

The *sides* of the main warm-air flues (tinted light brown) are to be of 9-inch work, and the branches, leading to the vertical flues and walls, are to be ½ B, with stone or slate top and bottom.

The *mouths* of these flues are to be enlarged to receive the warm-air valves at the situations indicated by the arrows on the plans, and which are to be fixed on wood frames let into the walls: and made good round the same when fixed.

Cut openings in bottom stile of doors to each day and attendants' rooms to receive a ventilator, and fix ditto.

Provide the same made in wood, and of a sliding pattern.

All the warm-air flues (both horizontal and vertical) are to be smooth plastered or rendered in mortar.

VENTILATING APPARATUS AND SUPPLY OF HOT WATER.

Set Boiler.—Cube of work, 8 feet × 6 feet × 5 feet, 450 fire-bricks, 4½ cwt. of clay, and 3 Stourbridge lumps, 30 inches × 10 inches × 6 inches. Cement smoke-flue, shown on plan to this boiler.

Lay on water to supply apparatus with 1½-inch service-pipe, and 1½-inch ball cock.

Syphon Pipe.—Provide about 16 feet of inch lead pipe for syphon, &c.

The *main foul-air flues*, and the branches in the roof (as shown on plan), are to be constructed of quartering, 3 inches × 2 inches, placed 12 inches apart, and securely fixed to the roof, and to be lath and plaster inside and out. The flues to be formed in the walls are also to be smooth plastered.

Provide and fix a *cistern* in the ventilating shaft, lined with lead, of the size shown on the detail drawings.

For cutting through walls for pipes, &c., and making good round the same.

Provision.—Providing and fixing bearers for ventilating apparatus, &c., and contingencies—say 50*l.*

Note.—This specification applies also in every particular to the male wing.

SPECIFICATION APPLYING EXCLUSIVELY TO THE FOUNDER'S TENDER.

(*See Drawings, No.* 10, 11, 15).

Metal.—The whole of the joists and large columns to be cast from English or Welsh metal, or from Scotch iron, mixed with either of the other sorts, in such proportions as may be approved, and as shall be found calculated for the several tests proposed.

The sashes, light columns, and cantilevers, to be of such a mixture of metal as shall insure clean and sound castings.

The whole to be of close grey metal, and all the articles for this asylum to be cast from the second running of the cupola.

The *castings* to be of the several forms and dimensions shown or described on the drawings; to have chipping fillets cast on them where necessary, so as to insure accuracy and good fitting.

To be kept as free from rust as possible until they are fitted, and have had a coat of paint.

Tests.—The whole of the castings to be submitted to such tests as may be considered necessary by the Architects. (The weight that each iron joist will be required to carry is marked in red ink on Drawing 15). The Contractor will be required to provide at his own expense, upon the site of the Asylum, either a press, or such other means of testing the joists as shall be approved by the Architect. Should any part or parts fail, or be damaged either in testing, or during the progress of the work, the same shall be removed by the Contractor, and its place supplied by sound materials.

Painting.—The whole of the castings to receive one coat of red-lead colour before leaving the founder.

Delivery.—The whole of the ironwork to be delivered by the founder on the site of the building, at such times and in such quantities, as shall be directed by the Architects.

Fixing.—The iron columns, girders, binders, and cantilevers, forming the corridor, or covered ways, are to be fixed by the Founders with all necessary nuts, bolts, wrenches, &c.

The whole of the iron joists to be fixed by the Mason.

The iron sashes will be hung by the Carpenter or Joiner; but the edges which work against the wood frames are to be filed by the Founder if the castings are not sufficiently true, even, and square to work correctly; the Architect to have power to determine if the filing is necessary, should any dispute arise upon the point.

The *tender* must state a *total sum* for the several works described in this specification, and shown or set forth in the drawings; but it must be accompanied with a distinct statement of the cost of each *joist*, distinguishing the letters and lengths of each sash, each column, heavy and light, each cantilever, and each girder; those prices will apply to such additions or omissions as may be made during the progress of the works.

LIST OF CAST-IRON WORKS.

No.	5	Large columns, A.
„	139	Small „ B.
„	4	Girders, C } over large columns.
„	3	„ D
„	75	Bearers or ties, E—to small columns.
„	14	Cantilevers, F.
„	156	Bearers, G—for corridors, 1246 feet.
		(For length of bearers for slate roof see plans.)
„	122	Corridor windows, ground-floor, H.
„	105	„ „ first floor, I.
„	8	Venetian windows, ground-floor, K.
„	5	„ „ first floor, same height as I.
„	4	Small windows of octagon lobby same as side lights of Venetian, G, F, K.
„	6	Small windows, same as side lights of Venetian on first floor.
„	187	Windows of cells, L.
„	19	Fanlights, M.

For number of cast-iron joists, see drawing and statement, No. 15.

Bolts, nuts, and screws necessary for the proper fixing and screwing of the ironwork.

Specification of Work to be done in Building and Completing the Lunatic Asylum, at Omagh, Ireland. WILLIAM FARRELL, Esq., *and* SON, *Architects.* 1848.

GENERAL PARTICULARS AND CONDITIONS.

THE several buildings to be constructed in all respects, agreeably to the particulars contained in the following specification, and in conformity with the plans, sections, elevations, and working drawings now furnished, and numbered from 1 to 34, or with such drawings as shall hereafter be provided in explanation thereof. Any description or particulars written on the drawings are to be equally binding, as if contained in the specification; and all figured dimensions are to be attended to in preference to the scale; everything is to be done that is usual and necessary for the completion of the several works, comprehending what may reasonably be implied by the plans or specification, although the same may not have been specially mentioned.

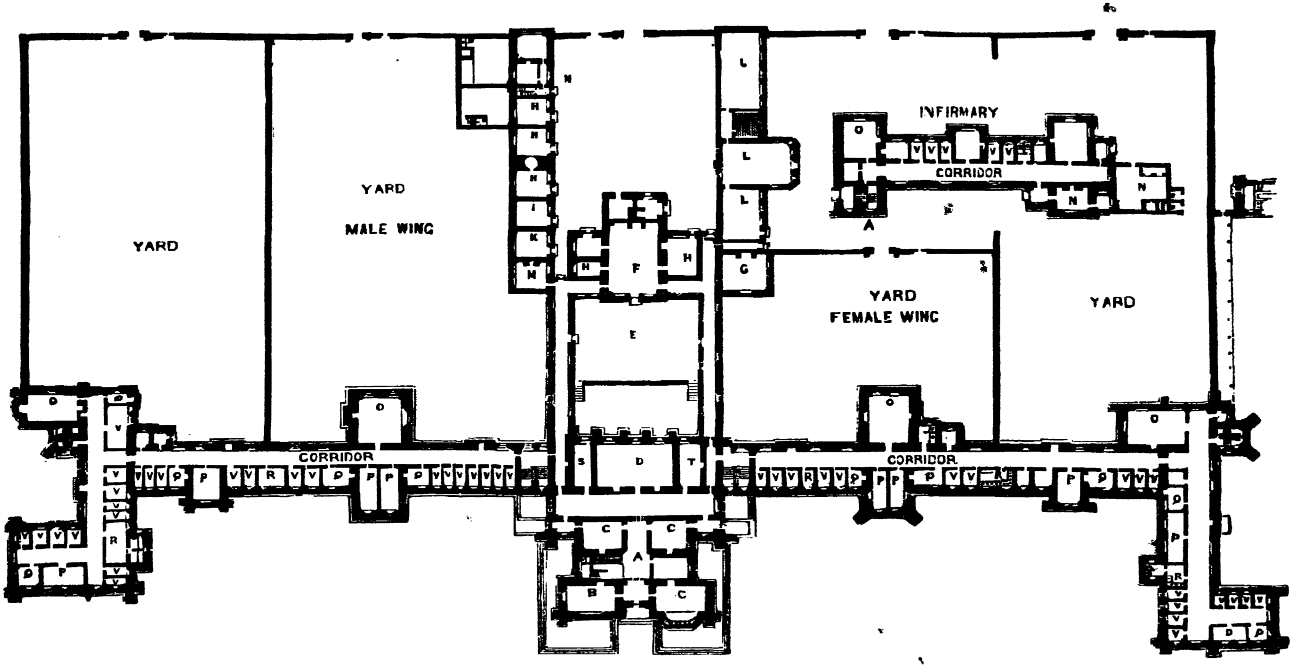
The Contractor is, at his own proper cost and charge, to provide tools, and everything necessary to complete the several works hereafter described, unless any special exemption be made.

The whole of the work to be executed in the most substantial manner, with materials of the best of their respective kinds; and all the buildings are to be left in a complete and perfect state, according to the plain intent and meaning of the plans and specification.

The whole of the several buildings and grounds are, on the final completion, to be left in a perfect state; the Contractor, at his own cost, to remove all rubbish that may have accumulated in the progress of the work.

The directions of the Architect, either given by himself or through the Clerk of Works appointed to superintend the building, are at all times to be strictly attended to, having reference to the specification and plans. The Architect is also to have full power to discharge or dismiss from the works any foreman, workman, or workmen, either for misconduct, incompetency or otherwise.

If the Contractor shall introduce unsound, imperfect, or unseasoned timber in any part of the building, which, though not discovered to be so in the first instance, shall, during the progress, or within six months after its completion, appear to be such, or if any work or works shall, in the opinion of the Architect, be



Omagh Lunatic Asylum.

MESSRS. W. FARRELL & SON, ARCHITECTS.

executed with unsound, imperfect, or unskilful workmanship, the Contractor is, at his own expense, to rectify, reform, and reconstruct the same, either in whole or part, as the Architect may direct; and if the Contractor, upon notice being given in writing by the Architect, shall refuse or delay, within a reasonable time to be specified in the notice, to make good or exchange all unsound or unseasoned materials, or repair unskilful workmanship, the Commissioners may direct the same to be done by other workmen, and the expense thereof shall be deducted from any money due to the Contractor on account of said building, or recovered from him and his securities.

In case the works shall not be carried out with proper despatch so as to afford, in the opinion of the Commissioners of Public Works, a reasonable probability of their being completed within the period stipulated in the contract, the Commissioners on giving ten days' notice, shall and are to enter on the work, and employ such persons, either by contract or otherwise, as they shall deem proper, to provide the necessary materials, and to complete the works; the expenses thereby incurred shall be paid out of any money due to the Contractor on account of said building, and any deficiencies to be borne by the Contractor's security to the contract.

No portion of the work is to be underlet by the Contractor, unless with the express approbation of the Commissioners or their Architect, in writing, but all the labour is to be done by his own workmen, and paid in day wages. The Commissioners of Public Works shall be at liberty to make any alterations, additions, or deductions in the buildings, either before their commencement or during the progress of the work, as may be found expedient, which alterations shall not vitiate or annul the contract, but the value of the same shall be ascertained by the Architect, and either added to or deducted from the amount of the contract, as the case may be; the value of such extra work or omission to be regulated by the prices contained in the detailed estimate delivered with the Contractor's tender.

The award of the Architect in all cases of extra work, or work omitted, or other matters in dispute, or as to the meaning of the plans and specification shall, if such award be approved of by the Commissioners of Public Works, be final and conclusive. No allowance above the amount of the contract will be made for any work unless it shall have been ordered in writing by the Secretary to the Board, nor unless an account of the said work be delivered to the Architect or Clerk of Works within three days after it has been performed; should it be necessary at any time to suspend the work on account of weather, the Architect shall have the power to do so; and no extra charge be made by the Contractor on that account, but an extension of time for completing the work shall be allowed, equal to that in which the work shall have been suspended.

The Contractor to provide and fit up an office for the Clerk of Works, on such part of the ground as the Architect shall direct, to consist of two rooms, 12 feet square, with desk and drawers, two stools, and table, fire-place and grate, plastered on the inside, with boarded floors; which building is to be removed on the completion of the contract, and the materials to be the property of the Contractor. Plans of the building will be lodged with the Clerk of Works, to which the Contractor or his foreman shall have access in all working hours.

The works to be commenced immediately on signing the contract, and to be completed on or before the day of
18 .

Should the work not be completed within the time specified, the Contractor shall forfeit the sum of *5l.* per week for every week the work shall be delayed beyond that period, unless good and sufficient cause shall, in the opinion of the Commissioners, be alleged to justify the delay.

As the whole of the branches of the work will form one contract, each tender is required to state a specific sum for the erection and completion of the building. The tender, however, is to be subdivided as under—viz.

	£	*s.*	*d.*
I.—For the cutting and levelling for the site of the building, digging foundations, forming all the sewers and drains, and levelling the ground round the building			
II.—For the governor's and matron's apartments, board and reception rooms, staircases, connecting corridors, porches, chapel, recreation hall, &c., comprising the works in the centre building			
III.—For the main building, and wing, west of the centre, comprising the accommodation for the female patients			
IV.—For ditto, ditto, east, for male patients . .			
V.—For the kitchen and passages to it, including the scullery, and boiler-house, larder, fuel-store, steward's apartments, and all the offices			

£ s. d.

attached, forming the east range of offices, including the covered passages, and the enclosing walls, and gates of kitchen yards .

VI.—For the west range of offices, comprising the laundries and matron's store . . .

VII.—For the infirmary complete . . . .

VIII.—For the boundary walls, including the coping gates and piers, at so much per lineal foot, exclusive of excavation . . . . .

IX.—For the airing-yards, and infirmary walls, and privies, per lineal foot, exclusive of excavation of sun fence . . . . . .

X.—For the entrance-lodge and gateway . .

The total of the above is to include everything that is necessary for the erection and completion of the Asylum, conformably with the detailed specifications, plans, &c.

Every tender must be accompanied by a sealed envelope, containing a copy of the estimate in detail, upon which the tender is formed, with the quantities and prices. Only the sealed paper accompanying the tender, that shall be accepted will be opened; and the copy of the estimate contained therein will be kept by the Commissioners; the others will be returned unopened, after the proposal for the work is finally adjusted.

Payment to be made, as the work proceeds, in the proportion of nine-tenths of the value of the work done, or of materials provided and delivered on the Board's premises, to the amount certified by the Architect and approved of by the Commissioners of Public Works, and the balance within a period not exceeding six months after the building shall have been completed, and that the work has been certified by the Architect to have been duly performed according to the contract. The Commissioners will, if required so to do, purchase stock with the surplus arising from retaining 10 per cent. on each certificate. when the sum so retained shall amount to 500*l.*; no payment, however, to be made in a less sum than 900*l.*

The Commissioners will not recognise any claim for remuneration for the trouble or expense incurred by parties, who may think proper to tender for the work; nor will they bind themselves to the accuracy of the quantities which shall be taken out by the measures, but will hold the Contractor responsible for the execution of the work, agreeably to the plans and specification.

The Contractor to make, at his own expense, copies of all the

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drawings he may require, which are to be returned to the Commissioners at the conclusion of the work, if called on so to do.

The ground plan, on a scale of 20 feet to an inch, is for marking the general arrangements for particular dimensions. (*See* Plans on the large scales.)

SPECIFICATION OF WORKS.

EXCAVATION.

All the *excavations* to be dug to the depths shown on the drawing, and sufficiently wide to admit of the footings being properly executed. The several excavations to be made for sewers, drains, and cesspools, to the depths sufficient to carry off the water as the Architect shall direct.

The *airing-yards* to be levelled with proper falls to the drains, using small rubbish, or the gravelly material on the ground. The coating will be done hereafter by the patients.

The space under all boarded floors is to be excavated sufficiently to allow of being covered with 6 inches of concrete or other approved material, and a space of 6 inches to be left between the joists and the surface of the concrete.

When the walls are built to the height of the ground, the trenches for 12 inches in height and 6 inches wide, at the least, are to be filled with broken stone on the external side, round all the main buildings, forming a French drain, having a communication with the sewers, so as to draw the water from the foundations. For depths of excavations for seating the foundations, *see* Masonry.

Provide in estimate for 30,000 yards of cutting and levelling, so as to arrange the general surface of the ground, to be in addition to the prescribed depths of foundations. Provide also in estimate for the sum of 100*l.*, for making the necessary approaches to the building, and also for the sum of 50*l.* for draining the site.

MASONRY AND BRICKWORK.

The *footing courses* of the foundations to be laid with large, even bedded, flat stones, the first course to be laid with large flags, not less than 6 inches in thickness. The foundations of main buildings may be calculated at a depth of 3 feet below the levelled surface for all walls over 18 inches in thickness, and 2 feet for all walls 18 inches thick and under. For the thickness of the several walls, *see* Sections.

All the *walls* throughout the building to be built of the several thicknesses shown on the drawings. All external walls above

14 inches in thickness, to be built of first-class, uncoursed, rubble masonry, with horizontal and vertical joints; on the outside face no stone to be more than 15 inches in height, or less than 4 inches; the rubble to be procured from the quarry at Cranny, or any other quarry that may be approved of by the Architect; the work to be well hearted and grouted, with not less than 3 thorough bond stones to the perch; the stones to be laid on their natural bed, and the external surface to be neatly pointed in blue mortar.

All *external quoins* are to be in heights of from 12 inches to 16 inches, the head worked square, to return for at least 12 inches; the lengths, from 1 foot 4 inches to 2 feet, to be rough-punched with a chisel-drafted margin with fair setting beds; no expensive workmanship will be required provided the dimensions are adhered to.

The *inside* of all the external walls of the three-story buildings, hospital, and kitchen, to be lined with sound, well-burned bricks, three courses of 4-inch brick, and the fourth, a thorough 9-inch course, bonding with the masonry. All walls of 14 inches and under to be built of brick.

All internal jambs, quoins, and arches (unless where otherwise described), to be executed in brickwork in 9 and 14-inch bond.

The *mortar* for the building to be composed of fresh roach lime, and sharp clean sand of an approved quality, in the proportions of 1 of lime to 2 of sand, mixed together in a pug-mill to be erected on the spot for that purpose. No more mortar to be mixed in the one day than can be used in the same.

All *masonry and brickwork* in walls above one brick in thickness, and of a height to require scaffolding, to have a scaffold on both sides of the wall, no over-hand work will be allowed, and the building to be carried up uniformly in the progress of the work, no one part to exceed another in height above 4 feet without the consent of the Architect.

Brick inverted arches to be turned under all openings exceeding 3 feet wide in the basement-story, and the parts of the principal story having no basement to be semicircular; where the depth of the work will permit it, stone-discharging arches 1 foot 4 inches × 1 foot 1 inch, to be turned over all openings of 3 and 4-light windows; those over opens that may have lintels to be turned clear of the ends thereof, the masonry or brickwork abutting.

Trimmer arches, ½-brick thick, to all fire-places, except where otherwise described; arches over all privies 4½ inches thick.

Apertures for the admission of air, under the boarded floors of ground-story, to be formed in exterior walls not exceeding 10 feet apart, and cast-iron perforated bricks, 9 inches × 3 inches, fixed therein.

Wrought-iron chimney-bars, 2½ inches × ½ inch, to be provided for all chimney-opens to be 18 inches longer than the opening; and in all cases where the breast of the chimney projects before the face of the wall to be turned up 2 inches at each end.

Asphalte Bed.—To prevent the humidity of the earth ascending and the damp becoming injurious to the building, a coat of asphalte, 1 inch thick, to be laid on all the walls of the three-story buildings and infirmary immediately below the floor-line; and under all the sleeping-rooms on the ground-floor is to be placed 4 inches thick of lime and gravel concrete.

Manholes, 2 feet square, to be constructed over the main sewer at every 150 feet of its length, which are to be covered with a 4-inch flag, having an iron ring in the centre.

Cesspools, as No. 5, Sheet 24, to be built under all stack-pipes, gratings, or sunk stones, to be rendered in cement, the top to be covered with a flag of 5 inches thick, dished in the usual manner, having metal gratings properly trapped; the cesspools under the stack-pipes to be 14 inches square, those under the gratings and sinks 18 inches square; the bottom, in all cases, to be 18 inches below the drains.

The *inside of all walls* of buildings not described to be plastered, and to be left with as uniform a surface as possible, and the joints flatted with mortar to receive whitewashing. Construct all walls necessary to support steps 1 foot 6 inches thick.

Air-flues.—Provide 2000 feet of flues constructed of brick in the thickness of the walls, 14 inches × 4½ inches, to lead into the foul-air case to be hereafter constructed in the roof.

Ovens.—Provide in estimate the sum of 50*l.* for constructing the ovens in bakehouse.

Privy-walls to be 1 foot 6 inches thick, of rubble masonry, with footings of 2 feet thick, the fronts 7 feet high, and the back, where not formed by adjacent buildings, to be 10 feet high; the position of these privies will be decided on hereafter; arches over all privies to be 4½ inches thick.

Fence-walls.—The heights and thickness of the boundary and airing-court walls are given in detail (*see* Sheet No. 24), and are to be priced at so much per lineal foot for foundations and superstructure separately (the position and extent not being yet determined on); the boundary walls to have a Scotch coping, the airing-yard walls and all other walls to be coped with a rough-punched semicircular coping, 2 inches wider than the top of the wall and 9 inches thick in the radius.

Paving.—The entire of the basement of centre building, except the fuel store, the kitchen and passages, laundry, and all the culinary offices, except the matron's store and steward's living-room, to be laid with chiselled free-stone flagging, full 3 inches thick, properly squared and swum in mortar, on a bed of broken stones, 6 inches thick; no flag of less than 4 feet superficial to be laid, and all flagged apartments throughout the building to have a *chiselled free-stone skirting*, 6 inches deep and 1½ inch thick. The privies to be flagged with free-stone, 3 inches thick, on brick arches, 4½ inches deep.

The bath and washing-rooms to be laid with rubbed free-stone flags, 5 inches thick, laid on 2 transverse metal girders, with channels formed in the flags leading to the discharging opens, and to have a 6-inch free-stone skirting, the joints to be joggled and run with lead.

The principal hall and staircase connecting corridor (on the principal story only), and the three porches to centre building to be laid with 3-inch thick rubbed free-stone flagging, as before described, and to have a 6-inch rubbed free-stone skirting, moulded on the upper edge; the flagging of main hall to be laid diamond-shape, and rubbed free-stone sills, 9 inches thick and of the widths of the walls, to be laid in all the door-opes described to have iron fire-proof doors.

Sewers.—The entire of sewers and drains to be laid throughout with a proper current of 2 inches in 10 feet, or as the Architect shall direct in the progress of the works, and in the positions he will point out.

Provisions.—Provide 1100 feet lineal of main sewer, the clear dimensions to be 3 feet deep, 2 feet wide at top, 1 foot 6 inches at straight part of bottom, the side-walls, 1 foot 6 inches thick, of rubble mortar masonry, the bottom to be a 4½-inch brick inverted arch, the top to be covered with rough flags not less than 4 inches thick, with bearing of 8 inches, the entire bedded in mortar. Provide for 1600 feet lineal of *sewer* from water-closet sinks, and executed in a similar manner to the main sewer, 2 feet deep and 1 foot 6 inches wide in the clear. Provide for 1350 feet lineal of similarly constructed *sewers* as the above, 1 foot 6 inches high, 1 foot 3 inches broad in the clear, the invert to be rendered with Roman cement from the laundries. Provide for 1120 feet lineal of sewer from rain-water pipes, the bottom to be constructed with an inverted ridge tile; the side walls to be of bricks, 4½ inches thick and 9 inches high, the top covered with a rough flag not less than 2 inches thick. Provide for 2000 feet lineal of surface *drains* for the yards and airing-courts, to be of small selected pebble paving, 3 feet wide, to lead to metal gratings, 12 inches square, conveying the surface-water to the sewers.

The *external jambs and arches* of all the doors and windows of office buildings, except the kitchen, to be formed of hard, sound, well-burned bricks; the chamfer bricks to be made and burned to their required form.

The *smoke-flues* throughout the building, except the kitchen flues, to be formed of circular fire-clay pots, 12 inches in diameter. The kitchen and boiler flues to be formed of brickwork, 14 inches square, to be properly pargetted.

The *ash-pit*, adjoining the boiler-house, to be sunk to a depth of 3 feet below the level of kitchen; the walls to be built of 18-inch rubble masonry, standing the same height as boiler-house, to be covered with a 4½-inch brick arch. An aperture and flue, 14 inches square, to be formed near the springing of the arch, conducted into the kitchen chimney-shaft to carry off the foul air, and an aperture or man-hole of 3 feet by 2 feet 6 inches, with a stone sill and ledged door, to be formed in the side wall for throwing in the ashes; the bottom of the pit to be paved, and the arch covered with asphalte.

Entrance, Lodge, and Dead-house.—Provide in estimate 250*l.* for lodge and entrance gate, &c., and 50*l.* for dead-house, to be erected where hereafter directed by the Architect, and estimated by him on the schedule of prices to be attached to the contract.

Well.—Provide for sinking a well 50 feet deep and 4 feet diameter, clear of walling or stoning, and domed at the top with a 9-inch brick arch, valued for gravel-sinking, and extra if rock.

The basement story of central building to be arched with 9-inch brickwork, except the fuel stores, which are to be groin-arched, as shown on the plan.

A *tank* to be built in such part of the Asylum grounds as the Architect shall direct, to be 20 feet long, 6 feet wide, and 6 feet deep to the springing of the arch, which is to rise 12 inches, and be constructed of 9-inch brickwork. The walls to be 2 feet thick, of rubble masonry, plastered with Roman cement, composed of two-thirds cement and one-third clean sharp sand. The masonry walls to be lined with a course of brickwork, 4½ inches thick, laid in cement. A man-hole to be constructed in the crown of the arch, 2 feet square, covered with a 4-inch limestone flag, 2 feet 6 inches square, with an iron ring fixed therein. The bottom to be laid with bricks on the edge in Roman cement, on a bed of concrete, 6 inches thick.

A *cesspool* to be constructed on such part of the grounds as shall be decided on at the termination of the main sewer, to be 20 feet long and 10 feet wide, to be covered with a 9-inch brick arch, and to be 6 feet deep to the springing of the arch, and having a 12-inch square aperture near the top for an overflow, and a 2 feet 6 inches square aperture in the crown of the arch, with a 3-inch flag and ring inserted in it. The walls of the cesspool to be of rubble masonry, 2 feet thick, lined with 4½-inch brickwork, laid in cement mixed with sand, and the inside coated with Roman cement, as described for the water-tank.

CUT STONEWORK.

Stone.—All the cut stonework throughout the building to be supplied from the quarry of Drumquin, or any other quarry in the neighbourhood, as should be approved of by the Architect, and of the scantlings drawn and figured on the detail drawings.

The *quoins* of the main and centre buildings, infirmary, day-rooms, dormitories, chimney-shafts, to be of rough-punched stone, with chisel-drafted margins on the top and bottom, and quoin edges of irregular heights and lengths, varying from 6 to 15 inches, each stone with a return bed equal to its own height, without any projection before the face of the masonry.

The *plinth* all round the building to be of punched stone, with a chiselled chamfer, with beds of 9 and 14 inches alternately, and of irregular lengths. All the quoin stones of plinths to be wrought in the solid; no mitred joints will be allowed throughout the building.

The *jambs, heads, sills, and mullions* of projecting windows, and flying oriels, to be of neatly chiselled stone. The water-tables and corbelling to be punched work, with chiselled margins and mouldings, as per detail. The jambs and mullions of all the windows of main and centre building and infirmary, all steps and corbels, barge, eave, and string coursers, and generally all chamfers and mouldings throughout the building, shields, solid kneelers, the shafts of chimneys, and all work not otherwise described, to be of neatly chiselled stone.

The *arch and balcony front* of centre building to be very neatly chiselled, of the finest grain stone in the neighbourhood, according to the detail; all the other parts of the stoneworks, the buttresses and their water-tables, the water-tables of chimneys, octagonal part of tower, with their water-tables, are to be of punched and chisel-drafted stone. The jambs of the kitchen windows and door to be rough-punched, the eave course to be 5 inches deep, with 5 inches' projection, and 9 inches wall-hold.

Proper bonding to be observed in all stone-cutting; all mullions to be in long lengths, and where jointing is necessary, a piece of 4lb. lead to be laid between composition cramps or dowels, as may be required.

The joints of all arches to radiate from the centre of the circle from which they are formed; all door-frames attached to stone-reveals must be properly bolted thereto, and fixed in the stone sills. The opes in all the airing-courts and yard-walls to be rough-punched reveals and arches.

The *jambs* of all doors and windows are to be of irregular heights and lengths, flush with the face of the wall, preserving, however, good bonding throughout, the end-tailings into the masonry to be left with the natural edge of the stone. The stone cutting to be well bedded in prepared setting mortar, properly cramped where necessary; holes cut for, and ironwork everywhere carefully inserted and secured.

The *piers* of all large gateways and dressings of doors in yard-walls to be hammer-dressed, with the necessary hooks for hanging the gates let into the stones in the usual manner.

The *staircases* of the main building and infirmary to be of a good class of stone, to be approved of by the Architect, to be finely chiselled, with 12-inch treads, and 6-inch risers, rebated, the soffits wrought to an uniform raking surface, and chiselled. The steps to have a lodgment in the wall, of 6 inches at each end, the landings to be 6 inches thick, wrought both sides, joggle-jointed, and run with lead, to have 9 inches wall-hold.

Observe the same instructions for the staircases of the basement story of central building and the infirmary.

Reveal all the external doorways to receive the frame, also form the grooves to receive the sashes, as shown on the plan; the backs of all mullions and internal heads of pointed windows to be chisel-dressed.

Chimney-pieces and hearth-stones to be provided and fixed according to drawings hereafter to be furnished, those for the board-rooms, master's and matron's sitting-rooms, to be of the value of 8*l.* each, and for all other rooms at the average cost of 3*l.*, to be approved of by the Architect, and also plain freestone chimney-pieces for rooms in kitchen offices, value 1*l.* each.

Front to seat of water-closets for patients to be of 2-inch rubbed freestone flags, or other approved flags, 1 foot 6 inches high, properly secured to the floor with bolts and nuts on the upper edge, to receive the timber seats.

Washing-basins.—Provide and fix in all the washing-rooms 2-inch slate shelf, 20 inches wide, rounded on the edges, with divisions 4 inches high and 2 inches thick, and pierced for and supplied with japanned or porcelained iron basins, all to be supported on iron brackets securely let into the walls; the bottom of basins to be fitted with a brass valve and plug, and inch waste-pipe opening into a 4½-inch main waste-pipe leading to the sewer; the space from the shelf to the ground to be sheeted with ¾-inch rebated sheeting, in 4½-inch breadths. Provide also an inch supply pipe from the cistern, and a ½-inch brass supply cock for each basin.

Chamfered and rebated door-blocks for all doors, 6 inches high, with thorough stone sills to all external and office doors. All projecting cornices and mouldings to have bearings of not less than ⅓ more than their own projection.

Fire-places.—Chisel-dressed and chamfered facings for fire-places of kitchen, corridors, and day-rooms of main buildings and infirmary, to be 10 inches deep and 6 inches thick, and plain stone chimney-pieces for all attendants' rooms, value 1*l.* each. Rubbed freestone hearth-stones, 2 feet wide, for all fire-places, 18 inches longer than the opes, with suitable back hearths.

Freestone sink-troughs, 3 feet long and 18 inches wide, and 6 inches deep, for the two sculleries in central building, steward's, and infirmary kitchens, with 2-inch stink-traps set in each; a similar trough, 5 feet long, to be provided for the principal kitchen scullery.

All *steps and platforms* to external doors to be of chiselled and weathered stone, the platforms to be 2 feet wide and 12 inches longer than the ope, average 3 risers to each door, the steps to have 12-inch treads and 6-inch risers, and in single lengths if under 6 feet.

Chiselled blocks as bases, for all metal columns supporting covered ways, to be 6 inches square, chamfered, and 6 inches high; as also chiselled stone corbels of the patterns shown on the drawings under all bearing timbers, where directed.

Chiselled stone copings over all area-walls, 4 inches deep on the edge, saddled up to 6 inches in the centre, and projecting 4 inches before each face of the walls throated; stone kerbs, 12 inches × 6 inches, for all iron grating over sunk areas.

Proper chiselled dish-stones under all down-pipes, and for all surface-drains in yards, with 9-inch cast-iron gratings set in them.

Chiselled stone steps from sunk kitchen yards, and, wherever necessary, to have 10-inch tread, 8-inch riser, set on brick or stone walls, forming privies or dust-pits underneath.

Freestone flag divisions between all water-closets and urinals, 2 inches thick, with channels cut in the flagging, perforated and trapped, the divisions 6 feet 6 inches high and 2 feet wide.

Freestone flag window-seats 2 inches thick, projecting 2 inches before the face of the walls for all the windows of kitchen and laundry offices, basement story, and also for the windows of infirmary. *Rubbed freestone flag window-seats,* with rounded nosings, for all the windows of the corridors, day-rooms, and sleeping-rooms.

Paved channel courses, 3 feet wide, all round the entire rear elevation of main building and infirmary, with the requisite strand-falls.

CARPENTER'S AND JOINER'S WORK.

Timber and Deals.—All the rough timber for the carpenter's work, including the roofs of all the buildings, the joists, lintels, door-frames, and the flooring of the entire building (unless where otherwise described), to be of the best description of Dantzic, Memel, or Riga fir. The joiner's work to be of the best Christiana dry deals; and red deal is, in all cases, to be understood, unless where white deal is mentioned. Every description of timber to be well seasoned, free from sap, shakes, and other imperfections, to be sawn die square, and to finish to the several scantlings figured on the drawings.

All *floor and ceiling joists,* rafters, and quarterings, except where otherwise expressed, to be fixed at distances not exceeding 10 inches apart; all joists and rafters to be secured to their respective plates. The spaces opposite all fire-places and flues to be trimmed; the trimmers and trimming-joists to be $\frac{1}{8}$th of an inch additional in thickness for every joist they have to support. All ceiling-joists to be 4 inches × 2 inches, when the bearing shall not exceed 10 feet, above that bearing to be $4\frac{1}{2}$ inches × 2 inches.

All *floor-joists,* above 10 feet bearing, to have at least 9 inches wall-hold, and those of 10 feet and under to have 6 inches wall-hold; all girders at least 12 inches wall-hold. All floors, above 12 feet span, to be bridged, with $1\frac{1}{2}$-inch bridging, the whole depth of the joists. All plates to be in long lengths, to be well halved and spiked together at their joinings. No timber, in any case, to be closer than 9 inches to a smoke-flue. Wood bricks to be built into the work, not exceeding 3 feet apart, for the purpose of securing skirtings, and in the jambs of all doors, and windows, and walls, which are to have timber-linings, for the purpose of fixing the joiner's work thereto. *Lintels*, the full width of the walls, to be laid over the openings of the doors and windows of the central building, and over all opens, in the 9 and 14-inch walls, throughout the main buildings and infirmary.

All the *gutters* to be laid with 1⅛-inch red deal, on stong bearers, to be 9 inches wide in the narrowest part, and to have a fall of 1 inch in 10 feet. Drips, 2½ inches deep, to be formed at distances not exceeding 12 feet apart. The gutter-boards to run at least 9 inches up the rafter. All valleys to be laid with 1-inch red deal, 22 inches wide. The large cistern over the corridor of centre buildings to be laid with 1¼-inch red deal; also the small cistern over the porches. The heads of all external doors and all windows are to be arched on proper centres.

For the *roofs* of principal buildings see sections upon which the scantlings are figured. The chapel roof to be wrought, and all the timber stop-chamfered. The rafters sheeted with inch thick, and stuck and rebated sheeting in 6-inch breadths, planed on one side.

The *roofs of the kitchen*, scullery, and laundries to be open; the timbers to be rough-planed for staining or painting. The framing of the principal roofs to be put together with all necessary straps of 2½ inches × ⅜-inch English iron, and ¾-inch screw-bolts. The ends of all the principals of roofs, girders, tie-beams, &c., to have their bearing encased in milled lead of 5 lbs. to the superficial foot. All purlins to be properly scarfed at their joinings.

All the *joists* of the first floor of the centre building, wings, and infirmary, that are laid on either dwarf walls or vaulting, to be 5 inches × 2½ inches, laid on tassels 4 inches × 2 inches. The joists of single rooms to be laid transversely. The joists of the day-rooms and large dormitories on the second and third floor of main buildings and infirmary to be 12 inches × 2 inches; joists of single rooms, 6 inches × 2 inches; corridors, 8 inches × 2 inches. The joists of all rooms exceeding 20 feet span to be supported on trussed girders, 12 inches × 10 inches; the joists over girders, 7 inches × 2 inches. Joists, in all rooms of centre building to be 10 inches × 2 inches; connecting corridors, 8 inches × 2 inches. Joists over kitchen offices, 10 inches × 2 inches.

All the *floors*, except where otherwise described, to be 1¼ inch thick, and in breadth not exceeding 7 inches, laid with a straight joint.

The chamber and attic *floors* of centre buildings to be laid with inch St. John's deal, laid straight joints, in breadth not exceeding 8 inches. The rooms over offices to be laid with inch Memel.

The *joiner's work*, requiring to be framed, to be put together in the best manner with glue and white-lead, and to be proceeded with as soon as possible after the contract is entered into, but not wedged up until directed by the Architect. All flooring-boards must be cut up and prepared within 3 months of the time of commencing the building. All scantlings and thicknesses to finish to the given dimensions.

Sound Boarding.—All the floors of the first floor throughout the building and infirmary to be sound boarded with ¾-inch deal, rough jointed and fixed upon deal fillets 1¼ inch by 1 inch, and to be pugged with hair mortar. Mitred kerbs of inch oak 4 inches broad, to be fixed to all hearth-stones.

Moulded Skirtings.—1¼-inch deal, as per detail, 12 inches high, to the board-room, and Master's and Matron's sitting-room, and all other rooms with boarded floors to have skirtings 7 inches high and ¾-inch thick, chamfered and properly fixed.

All the day-rooms, corridors, dormitories, attendants', and single rooms throughout the building, to be skirted with inch deal 7 inches high, and chamfered.

Wall Linings.—The walls of all the day-rooms, galleries, principal corridors, and staircases of main building and infirmary (centre building not included), to be sheeted with ¾-inch deal, in widths of 7 inches, rebated, planed on one side, fixed to three rows of bonds 3½ inches by 3 inches, built into the walls, to be let on to a top rail 3½ inches wide, ½-inch thick, chamfered to correspond with the chamfer of door frames; the entire height, including top rail and skirting, to be 4 feet 6 inches. This item also applies to the infirmary, the recreation-room, and chapel. All rebates here and elsewhere to cover ½ inch.

Water-closets.—Provide for the 5 in the central building seat and risers of 1-inch plain Honduras mahogany, with ½-inch skirting, 3 inches wide round seat, inch chamfered flap hung with brass butts, and all fitted up in the usual manner. Provide a cistern for each, whose cubical contents shall be 12 feet, lined with 6 lbs. lead; a pan-closet with basin, and the usual apparatus, pipes, &c., of the best contruction. The closets on main building and infirmary, and the upper story of main building, to have plain deal seats, and risers, and flaps, in the usual manner. Provide 6*l.* for each of the closets to cover the expense of apparatus, pipes, and cisterns.

All *doors* exceeding 3 feet 6 inches in breadth, to be hung folding. All external doors to the principal buildings and infirmary (except the great entrance door) to be framed and sheeted with inch planed deal, rebated, in 4½-inch breadths. The stiles, heads, and sills, 2¼-inch deal, planed, framed, and stop chamfered, hung with strap hinges, in wrought, rebated, and chamfered deal frames, 5 inches square, with rings and iron tenons at the bottom, let in in the usual way. The principal doorway to be in two halves, the same description as above ; trenails to be used in place of nails, where the Architect shall direct. The external doors to the offices to be of 1⅛-inch deal, ledged and braced in 5-inch breadths, ploughed and tongued, and the frames, as above, of 4½-inch × 4-inch scantling. The inside doors to the central building to be of 2-inch deal, framed in four panels, check chamfered, hung with 4-inch cast-iron butts, with 1½-inch jamb linings, framed to correspond with doors where the jambs exceed 12 inches in width. The hanging stiles to be of 2-inch thick : architraves, as drawings, to be fixed on each face. The doors of attic bed-rooms and basement story to be 1¾-inch deal, framed as above, in 4 panels, hung with 3-inch butts ; the jamb linings for 4½ inches wide to be of 2-inch deal, wrought and rebated, the remaining widths to be sheeted with ¾-inch deal, to be planed and rebated ; and on each face of the door opening, fix a wrought and chamfered fillet of 2½ inches by 1½ inch, to form a stop for the plastering.

The *doors* to the day-rooms, dormitories, staircases, and single rooms, to be of 2-inch deal, in two thicknesses, wrought and rebated, with hoop-iron laid between at intervals of 6 inches ; to be hung with strap hinges, made to the direction of the Architect. The frames 5 inches × 4 inches, wrought, rebated, and chamfered. The jambs of all the doors in the plastered apartments, except to the staircases and single rooms, to be lined with ¾-inch deal, filled into a fillet of 4 inches by 1½-inch, projecting to stop plastering, &c., edges check chamfered. The face of all frames next to the corridors, to project and be chamfered, to meet and accord with the top fillet of the sheeting.

The *doors* in the yard walls to be the same as to the external doors to building, having a stone block fixed to receive them, with strong strap hinges extending the whole width of the door. The yard gates to be of 2¼-inch deal, framed and braced as to external doors, with inch deal sheeting in 4½-inch breadths, hung with strong strap hinges, with a strong bolt and bar as usual to each gate.

All *doors* not described, or not particularly shown in drawings, are to correspond in every particular with those described for similar situations.

The *wash-houses* to be fitted up with washing troughs of 2-inch deal wrought, framed, and fixed on stone pedestals, with supply pipes for hot and cold water to each, and cock with a valve at bottom, opening into a 4-inch cast-metal pipe, laid with a current to the drain.

SASHES, SHUTTERS, AND TRIMMINGS.

Sashes of 2-inch deal moulded, for the rooms on principal and second floors of centre building, and 1¾-inch ovolo moulded sashes for attic, basement, and third floors, to be double hung in deal cased frames, with oak rebated sills.

The *sashes* in oriel window will be hung on hinges to open outwards, according to detail; two compartments in each sash to open.

The *sashes and frames* for the corridors, day-rooms, dormitories, single rooms, kitchen, and offices, and the infirmary, to be of the best grey cast-iron, of the patterns of the drawings, with a portion of each sash to be hung on pivots, as shall be described. The frames to be carefully bedded in felt, saturated in white lead, and pointed with oil putty. The sashes and frames to be painted before leaving the foundry.

Shutters for all windows in central building, except to those of the water-closets and staircases; the shutters to the ground and principal floors to be of 1¾-inch deal, wrought, framed in panel, and stop chamfered both sides, the back folds framed square in two panels, and stop chamfered. All the shutters to be hung in one height; soffits, backs, and elbows, to be of 1¼-inch deal, framed in panels, and stop chamfered, with beaded capping in the usual manner, and skirted; the splayed boxings to be grooved to receive the back linings, which are to be of ¾-inch deal, tongued into sash frames and splayed boxings.

The architraves to doors and windows to be 7 inches wide, moulded with splayed plinths. See working drawings to the window dressings.

Shutters for the attic and basement floors to be of 1¼-inch deal, framed square in two panels, stop chamfered, with inch back laps-boxings, and ½-inch back linings, with single architraves 4½ inches wide, rebated and grooved. Two-thirds of the windows of the single rooms, and one-third of those in the dormitories, to be hung with shutters hung on hooks with strap hinges, the upper hook to have a nut screwed on it to prevent the shutter being lifted; the fastenings provided in the ironwork to be fixed. The shutters to be of plain wainscot 1½-inch thick, planed on both sides, and clamped, top and bottom, and rebated ¾-inch at the meeting. Provide similar shutters for all the dormitories, single rooms, day-rooms, surgeon's room, kitchen, and nurses' rooms in infirmary.

The *staircases* of central building to be of wood, the steps to be of clear 1¼-inch deal, the risers of inch deal, freed from knots, fixed on substantial carriages 8 inches by 4 inches, brackets and wall strings screwed and blocked. The nosings to steps to be moulded with cut brackets, and nosings mitred and returned. The balusters of oak, inch square, and stop chamfered; the handrail of mahogany, to girth 10 inches; 2 *iron balusters* to be fixed to each half-flight. Iron newels turned, and the steps and landings furnished with moulded skirtings.

Shelving and Rails.—Provide 1500 feet superficial of inch shelves, and proper brackets, to be fixed in store-room, pantry, &c.; also 1000 feet lineal, of inch moulded and chamfered rails, 3½ inches wide, strong metal pins, one to every foot in length, to be fixed as shall be directed.

Ventilating louvres over the kitchen and laundries as on the drawings, the scantlings to be 4 inches x 4 inches, properly braced with ¾-inch thick louvre boarding, the top sheeted inch thick, covered with 6-lb. lead; the top sheeting to project 9 inches all round.

Louvre frames for the opes in the gables on the elevations for ventilating the roofs; frames 4 inches x 2 inches louvre boarding, ¾-inch thick, set to a very acute angle, and having wire lattice inside, to keep out birds.

Five dormer windows, 2 on each wing and 1 on centre buildings, average scantling 4 inches x 2 inches, 3 feet high, 2 feet wide, the top covered with ton slates, the side with 5-lb. lead, with inch ledged doors, aprons, &c.

SLATING.

All the roofs for the centre and wing buildings, kitchen, laundries, and culinary offices, to be covered with the best Bangor queen ton slates, laid on sawn Memel laths of 2½ inches x ¾-inch thick (except the chapel): each slate to be secured with 3 clout-headed composition nails, the holes for which are to be drilled; the slate to have 4 inches cover clear of the nail-hole, all to be thorough rendered, except the chapel, with lime and hair mortar on counter lathing.

The roofs of the passages to kitchen, and the privies in the airing yards, and the covered ways, may be covered with duchess slates and ton eaves, thorough rendered, as before described.

The *ridges* to be covered with freestone ridge tiles, except the centre building and chapel, which are to be covered with cast-metal ridging, 8 inches on the wing, screwed to the ridge-board, bedded in mortar, and pointed with oil putty, and painted three coats.

PLUMBER'S WORK.

(*Milled lead in all cases to be provided.*)

The *platforms and gutters* throughout the building to be laid with lead 8lb. to the superficial foot; no gutter to be less than 9 inches wide in the narrowest part, having a fall of 1 inch to every 10 feet, with proper drips of 2½ inches deep, not more than 12 feet apart. The lead to turn up 9 inches under the slating and 6 inches against all walls, parapets, &c.

All *valleys* throughout the building to be laid with 6-lb. lead, 2 feet wide.

Step flashings of 5-lb. lead, 10 inches wide, and same cover as slates to all the chimneys, gables and abutting roofs, with counter-flashings built 2 inches into the wall, and turning down 4 inches.

Cisterns.—Lay all the cisterns with 6-lb. lead, having turn-down flashings of 5-lb. lead, 6 inches deep.

Aprons.—6-lb. lead for all aprons that may be required about louvres and dormers, 2 feet 3 inches wide, over culinary offices, &c.

Five best *pan water-closets* for the central building, with delft pan, service, waste, soil, and notice-pipes, completed in the most modern manner.

Pan water-closets in the different wards of main buildings and infirmary, where shown on the plans, with japanned metal basins, D traps, &c., complete, fixed so that the water will flow on opening the door. See item, No. 96.

5-lb. milled lead for all soil-pipes, 4½ inches diameter; also provide proper flashings in all places obviously necessary, though not particularly described.

Conical metal basins for the urinals adjoining the water-closets, with stench-traps and 2-inch washers, waste-pipe and brass plugs.

Inch supply-pipes from the cisterns to all water-closets and washing-places, and 1½-inch pipes for both hot and cold water to each of the laundries, and inch-pipes to the sinks.

Metal porcelained basins for all the washing-rooms as before described.

Inch brass *stop-cock* in such a situation as may be decided on, to enable the attendants to cut off the supply from the wash-basins at pleasure.

Provide lead for all cramps and dowels in the different parts of the stonework, and for setting all iron railings, &c. ; and provide for all traps, valves, cranks, wires, pipes, &c., that may be required to carry out the proposed waterworks connected with the baths, closets, cisterns, according to the intent of the plans and specifications, whether therein particularly alluded to or not, and agreeable to the future instructions of the Architect.

Provide and fix 2-inch washers and wasters with brass plugs, to sinks in wards and infirmary, with 2-inch lead-pipes leading to the soil-pipes.

Ball cocks for each of the supply cisterns.

PLASTERER'S WORK.

Materials.—The *lime* to be of the most approved quality that the neighbourhood affords. The *sand* to be clean, sharp, and free from loam or other impurities. The Roman cement to be quite fresh, and of the best kind. The *laths* to be cleft from Baltic timbers, to be of extra strength, nailed separately at the ends, and not to overlap each other. The heading-joints to be properly broken.

Plastering.—All the walls of the central building (except the basement story) to be plastered 3 coats, floted and coated. The halls and staircases to be finished in grey trowelled work for painting. The porches and connecting corridors, recreation-hall, and chapel, to be finished and lined rough ashlar-work. All the other apartments to be rendered, floted, and set in putty for papering.

The basement story of the central building (except the fuel vaults and cellars), to be rendered, skin-coated, and whitened.

All the ceilings throughout the central and main buildings, and infirmary, and the ceilings of the kitchen-offices, dining-hall, and matron's store-room, to be lathed, and plastered in 3-coat work, floted, and coated in lime putty.

The space between the joists of roofs of the laundries, kitchen, scullery, and boiler-house, to be rendered on laths and whitened.

The *walls* of the corridors, day-rooms, staircases, and attendants' rooms of the main buildings and infirmary, to be plastered in 3-coat work, floted, and set in rough stucco. The walls of all the other part of the building—viz., dormitories, single rooms, kitchen, laundries, passages, and kitchen-offices, to have 2 coats of thick lime whitewash, prepared with tallow.

Cornices.—For the hall, corridors, and rooms on the ground-floor of central building, except the surgery and porter's room, but including the recreation-hall, provide plain plaster cornices, average 12 inches' girth; for the rooms on the second and third floors, staircase, and corridor, provide cornices of 8 inches' girth; and for the plastered rooms and corridors of main buildings provide cornices of 4 inches' girth. No cornices for basement or attic stories.

Return the cornice along trussed girders in music-hall, and up the strings of principal stairs of centre building.

The *arrisses* of all projecting angles to be plastered with cement, and rounded off, or chamfered, as shall be directed.

All the rooms described to be counterfloored between the joists, to be plastered with 1 coat of rough-haired mortar, and filled with 3 inches of dry-deal sawdust.

PAINTER AND GLAZIER.

All knots in the woodwork to be killed previous to being painted; and after priming coat, the work to be carefully stopped with putty, and rubbed flat with pumice-stone and sand-paper, so as to produce a fair and even surface. All the woodwork usually painted to have 4 coats in oil, of a neat drab, or such other tint as shall be directed by the Architect.

All ironwork to roofs, hinges to gates, doors, and such as are usually painted, to have 3 coats in black or other colour, as shall be directed, and to be painted before the work is exposed to the weather.

All the sashes to be glazed with good C glass of an approved quality, and free from defects, selecting the best for the several sitting-rooms. All glazing to be left perfect and clean on the completion of the building.

FOUNDER AND IRONMONGER.

Windows.—The *sashes* of the whole building, except when otherwise described, to be of cast-iron, according to pattern. Three-fourths of the windows to have casements in the upper compartments, to open on a swing, hung so that it shall shut by its own weight, with screw fastening, and line running over pulleys fixed to the joists in the ceiling, and carried through wall into galleries, with hooks, &c. Provide wrought-iron sashes, according to the pattern, for 3 single rooms on the first floor of each wing building, which will be decided on hereafter.

Galvanization.—A separate item to be given in the estimate, showing what will be the additional cost for galvanizing the sashes.

Provide all straps, stirrup-irons, bolt-nuts, cramps, screws, washers, and all other ironwork that may be shown on drawings. Straps, 2½ inch × ⅜ inch, bolts ¾ inch diameter.

Rain-water Pipes.—Provide 49 cast-iron down-pipes 4 inches diameter in the clear, made water-tight, to principal buildings; 8 to be provided for infirmary, and 20 for kitchen-offices, of 3 inches' diameter; all with suitable hopper-heads, and shoes, and *convex grating;* and to be fixed with all requisite straps and holdfasts in the several positions that shall be pointed out by the Architect.

Gutters.—Provide and fix cast-iron trough gutters, 5 inches × 4 inches, and ¼ inch thick, to the eaves of all buildings more than 1 story high, and ditto, 4 inches × 3 inches, to the eaves of all other buildings, securely fixed throughout to the stonework by strong iron stay brackets 3 feet apart.

Gratings.—Provide and fix metal gratings, 12 inches square, with proper bell-traps, over all cesspools, drains, and in kitchen and scullery. Cast-iron bricks, 9 inches × 3 inches, not exceeding 10 feet apart, for all the timber ground-floors.

Provide 4-inch cast-iron pipe, where described, under kitchen, wash-house, and scullery.

Cisterns.—Provide for 4 plate-iron cisterns over each main building; 2, averaging 210 cubic feet, and 2, averaging 128 cubic feet, to be placed on the top of the main buildings, in such situations and of such dimensions, to the above extent of capacity, as shall be directed by the Architect, with cast-iron bearers where necessary; a 2-inch rising-main and all requisite waste, notice, and supply-pipes, brass cocks, &c., leading to the different wash-rooms, closets, sinks, &c.

Provide a similar cistern for infirmary, averaging 250 cubic feet, and 2 cisterns over scullery and larder of 400 cubic feet, with a partition in each for hot and cold water, to supply laundries and kitchen-offices, fitted as above with all requisite brass cocks, washers, and plugs, the plate iron to be ¼ inch thick, with connecting tension-rods complete.

Baths.—Provide for 12 baths on main building and 2 baths in infirmary; the baths to be formed of 2-inch plain wainscot, dovetailed at angles and put together with whitelead, and lined with zinc, furnished with hot and cold-water cocks, brass plugs, sockets, &c.

Pumps, boilers, and cooking-apparatus, not to be included in the proposal.

Skylights.—Provide for 4 cast-iron skylights over laundries of the best construction, and fix the same with broad flanches properly connected with the slating, 6 superficial feet of light in each skylight.

A wrought-iron chimney-bar to be provided for each chimney-opening, and, when the breast of the chimney projects, to be turned up 3 inches at each end; metal tenons, 3 inches × 1¼ inch.

Proper rings to be let into the bottom of all door-frames, let into steps, &c., run with lead where necessary.

Twenty-eight *door-scrapers*, fixed, value 5*s.* each.

Fixing.—All ironwork to be properly fixed.

Air-gratings.—Provide and fix 2 cast-iron gratings, 12 inches × 4 inches, in all single rooms and dormitories; also 50 in number where directed.

Copper Vanes.—Provide and fix 2, value of copper work with mounting, 3*l.* each.

Provide an average of 4*s.* per pair for all *strap-hinges* specified, plans hereafter will be given.

For *bell-hanging* provide 20*l.*, and 20*l.* for hooks, eyes, and small fastenings, not described in the specification.

Inspection escutcheoned apertures glazed in each cell-door, value 3*s.*

Provide fastenings and ornamental hinges, and lock, for entrance-door, value 5*l.*

Provide for the yard-doors and gates substantial boot-hinges, of a substance proportional to the weight of the gate, with strong bolts, swing-bars, &c. For all external doors and doors of offices and basement provide strong substantial thumb-latches.

Locks.—Provide for every door of the galleries, day-rooms, dormitories, and single rooms, a lock of the value of 10*s.* exclusive of fixing, and for all other doors to the value of 5*s.* each.

All framed doors, of 2 inches thick, to be hung with 4-inch butts; all under 2 inches thick with 3-inch butts.

Furniture.—Provide black-ball furniture for all doors and window-shutters on principal floor, and brass-ball furniture for upper story; also sash-fasteners and shutter-bars for windows.

Wrought-iron railing round all sunk areas, 4 feet 6 inches high, top rail, 2 inches wide, ½ inch deep, ¾ inch round rail, 6 inches apart, let into bottom rail, set on stone kerbs, with cast-iron balls.

Wrought-iron area-grating over the areas at rear of centre building, of $1\frac{1}{2}$-inch × $\frac{1}{2}$-inch bars, spaced $1\frac{1}{2}$ inch apart, properly leaded into stone kerbs. Provide cast-iron stench-traps to all scullery-troughs and rain-water sewers.

12 *wrought-iron fire-proof doors* for the main buildings; 6 of these doors to be 6 feet wide, 8 feet high, and to be hung, in the double, with strong pivot-hinges in metal sockets. The remaining 6 to be 4 feet 2 inches wide and 7 feet 4 inches high, also in the double, and formed to run into the walls in grooves on carriages and rollers, and secured with sliding bolts and padlock; the stiles of the doors to be of $1\frac{1}{4}$-inch square iron, with wrought-iron bars, $\frac{3}{4}$ inch × $\frac{7}{8}$ inch, rivetted to them to form a rebate at both sides; and the 2 faces of the door to be sheeted with $\frac{3}{16}$-inch plate-iron, secured with thorough rivets; each section of the door to have 1 vertical and 2 horizontal rails, in addition to the stiles for riveting the plates to. The jambs of the opens for these doors to be built of fire-bricks.

No. 4 *cast-iron double soot-doors* and frames, 12 inches square, to be built in the walls of corridors of centre building, in the positions to be fixed on hereafter, for the purpose of cleaning the flues of music-hall and kitchen fire-places.

Drawings for the chapel-fittings will be provided hereafter.

District Lunatic Asylum, Omagh. Extract from the detail of quantities measured from the Plans by THOMAS TURNER, *on the part of the Commissioners, and* PATRICK KERR, *Surveyor, on the part of the Contractors.* 27 *September,* 1848.

SECTION I.

FOR EXCAVATIONS, SEWERS, DRAINS, ETC., ETC.

EXCAVATOR.

Yds.		£ *s. d*
30,000	Cube, digging, removing, and levelling to form the general level of building site . @	
3340	Cube, digging for sewers, cesspools, and tank .	
5369	Cube, digging for basement and foundation of buildings, including filling in and ramming when the walls are built	
	For sinking, lining, and covering well, as described in item of specification . .	
	For forming the necessary approaches . .	
	For draining the building site . . .	

MASON AND BRICKLAYER.

Yds.	Ft.		£
89	8	Cube, masonry in walling of tank and cesspool	
11	18	Cube, brickwork in 9-inch arch over do., including centring . . . . @	
119		Superficial, 4½-inch brick in cement, lining to do., and bottom	
39		Superficial, concrete, 6 inches thick, under floor of do.	
	1100	Lineal, of main sewer, as section No. 1 . .	
	1600	Lineal, sewer from water-closets as do. No. 2 .	
	1350	Lineal, sewer from laundry, as do. No. 3 .	
	1120	Lineal, sewer from stack-pipes, as do. No. 4 .	
	2000	Lineal, pebble-paved surface-drain, 3 feet wide	
		7 Man-holes, formed over main-sewers, as described	
		77 Cesspools, formed under stack-pipes, as described by section No. 5	
		2 Flag-covers on tank, 2 feet 6 inches square, with iron ring leaded in do. . . .	

PLASTERER.

Yds.	Ft.		£
52		Superficial, cement plastering on inside of tank	
		1 Office for Clerk of Works, as described in specification	

ABSTRACT.

Excavator . . . .
Mason and bricklayer . . . . . .
Plasterer . . . .
Office for Clerk of Works . . . . .

SECTION II.

CENTRE BUILDING.

MASON AND BRICKLAYER.

Yds.	Ft.		£
372⅔		Cube, masonry in foundations and dwarf walls	
2627		Cube, masonry in superstructure . . .	
14½		Cube, masonry in discharging arches . .	
627		Cube, in brickwork in inside walls, jambs, arches, and lining to outside walls . .	

Yds.	Ft.		£ s. d.
45½		Cube, in brickwork in inverted arches @	
108½		Cube, in brickwork in 9-inch vaulting to rooms in basement	
28⅓		Cube, in brickwork in 9-inch vaulting to groined in do.	
	45	Cube, in brickwork in 4½ trimmer-arches	
1158		Superficial, *extra* for facing external walls, as described in specification	
95		Superficial, concrete, 6 inches thick, under boarded floors	
142		Superficial, pebble paving in fuel-stores	
344		Superficial, asphalte, 1 inch thick, laid on foundations	
	1251	Lineal, of fire-clay flue-lining, 12 inches' diameter, set in masonry walls	
	147	Lineal, French drains, as described in specification	
	144	Lineal, cutting on groined points (labour only)	
	1476	Lineal, cutting on splayed jambs, &c. do.	
	749	Lineal, square jambs to doors, &c., do.	
		112 Brick discharging arches, turned on lintels, do.	
		18 Opens formed through external walls, and fixing cast-iron air-brick	

STONE-CUTTER.

	6043	Cube, freestone in dressings to doors and window opens	
	2882	Cube, freestone in plinth barges, strings, copings, chimney-shafts, &c. &c.	
	336	Cube, free-stone in steps and landing to stairs, external doors, &c. &c.	
	3450	Superficial, punch and drafted work on quoins	
	1469	Superficial, punched, with chiselled chamfer on plinth water-tables, &c. &c.	
	40	Superficial, punched on rebated beds to covering of oriel	
	1287	Superficial, chiselled work on chimney-shafts and parapet capping	
	760	Superficial, chiselled work on stepsand landing to basement stairs, and steps to external doors	

Yds.	Ft.		£ s. d
	221	Superficial, chiselled work on steps and landing with moulded nosing @	
	1622	Superficial, chiselled work on weathered and throated coping and barge courses	
	856	Superficial, chiselled work on dressings to oriel windows	
	2589	Superficial, chiselled work on jambs to doors and windows, chamfered and rebated, as shown by sketch	
	1218	Superficial, chiselled work on mullions and transoms to do. as do.	
	1599	Superficial, chiselled work on heads to do. as do.	
	909	Superficial, chiselled work on sills to do. as do.	
	181	Superficial, chiselled work on gothic heads to doors and windows, chamfered and rebated as others	
	1066	Superficial, chiselled and moulded work, on caps and bases, to chimney-shafts	
	170	Superficial, chiselled and moulded work, on strings	
	266	Superficial, chiselled and moulded work, on parapet capping	
336⅔		Superficial, chiselled freestone flagging, 3 inches thick, laid in mortar on a bed of broken stones	
214⅔		Superficial, chiselled freestone flagging, rubbed and laid in mortar on a bed of broken stone	
19		Superficial, chiselled freestone flagging, laid diamond-shape	
	301	Superficial, chiselled freestone flagging, 2 inches thick window-seats	
	864	Lineal, 1½-inch rubbed freestone skirting, 6 inches high	
	457	Lineal, 1½-inch rubbed freestone skirting, 6 inches high, with moulded edge	
	200	Lineal, chiselled eave course, 14 inches by 5 inches, and 5 inches' projection	
	26	Lineal, chiselled plain barge course, 12 inches by 4 inches, to privies, &c.	
	45	Lineal, chiselled, chamfered, and rebated, tra-	

Ft.		£ s. d.
	cery in heads of chapel windows, 2 feet 3 inches girth . . . . . . @	
17	Lineal, chiselled gallery front, as Sketch No. 1	
250	Lineal, smoke-flue cut through solid stones of chimney-shafts	
20	Lineal, joggle-joints, and leading in landings	
37	Lineal, moulded edge, formed on flagging of landings to side entrances . . .	
200	Lineal, rounded edge, formed on flag window-seats	
No.	2 Moulded spandrils, with corbels to same, under gallery front, as Sketch No. 1 .	
	16 Moulded corbels, under truss beams, as Sketch No. 2	
	22 Moulded corbels, under trusses of chapel roof, as Sketch No. 3	
	4 Plain rebated kneelers, to barge on privies, &c.	
	2 Sink-stones, with traps set in same, and fixed as described in item 74 of specification .	
	10 Dished stones, with 9-inch square gratings in do.	
	14 pair of rebated and chamfered door-blocks, 6 inches high	
	2 Quatrefoil panels, about 2 feet square .	
	6 Perforations to stones, about 12 inches thick, for discharging water from roof .	
	3 Chimney-pieces with hearth-stones, value 8*l.* each, exclusive of fixing	
	20 Chimney-pieces with hearth-stones, value 3*l.* each, do.	

CARPENTER AND JOINER.

Ft.		
834	Cube, fir, rough, in lintels, plates, jamb-blocks, &c.	
2516	Cube, fir, rough, fixed in joist and roofing .	
213	Cube, fir, rough, framed in do. . . .	
166	Cube, fir, wrought in truss beams in two thicknesses	
935	Cube, fir, wrought, framed, and stop-chamfered in chapel roof	

Yds.	Ft.		£ s. d.
	78	Cube, fir, wrought, framed, and stop-chamfered in curved braces to do. @	
	30	Cube, fir, rough, rebated, and chamfered in door-frames	
	284	Superficial, ½-inch deal, wrought O.S., back lining to window jambs, tongued into frames	
Square.			
45	84	Superficial, ¾-inch deal, rough, sound-boarding and pugging	
	1796	Superficial, ¾-inch deal, wrought O.S., jamb and back-lining to doors and windows, tongued into frames	
	1134	Superficial, ¾-inch deal, O.S., rebated and beaded sheeting to chapel and music-hall	
	329	Superficial, 1-inch deal rough-valley boarding	
	3472	Superficial, 1-inch deal wrought O.S., rebated and beaded sheeting on chapel roof, in 6-inch breadths	
	126	Superficial, 1-inch deal wrought O.S., rounded edge window-boards and bearers	
	211	Superficial, 1-inch deal wrought B.S. backfolds, clamped and hung	
	199	Superficial, 1-inch deal, wrought B.S. glued and blocked risers to stairs	
	98	Superficial, 1-inch mahogany seats and risers to W.C.	
	56	Superficial, 1-inch mahogany-framed and hung covers to do.	
43	59	Superficial, 1-inch St. John's deal flooring, laid in 8-inch breadths	
	176	Superficial, 1⅛-inch deal, rough gutter-boarding and bearers	
	32	Superficial, 1⅛-inch deal, doors ledged, braced, and hung	
	1336	Superficial, 1¼-inch deal rough, and edges shot in boarding on platform and large cisterns on roof	
75	70	Superficial, 1¼-inch deal flooring, laid straight joint in 7-inch breadths	
	539	Superficial, 1¼-inch deal shutters, framed in 4 panels, stop-chamfered, B.S., and hung	
	613	Superficial, 1¼-inch deal backfolds to do., framed in 4 panels, stop-chamfered, square, and hung	

Ft.		£ *s.* *d.*
284	Superficial, 1¼-inch deal shutters, framed in two panels, same way as backfolds, and hung @	
870	Superficial, 1¼-inch deal backs, elbows, and soffits, framed as shutters	
18	Superficial, 1¼-inch circular soffit, do.	
439	Superficial, 1¼-inch deal glued and blocked insteps to stairs, with moulded nosing	
97	Superficial, 1½-inch deal, wrought O.S., dovetailed, in cisterns	
921	Superficial, 1½-inch deal jamb lining to doors, framed in 2 panels, stop-chamfered and rebated	
677	Superficial, 1¾-inch deal, ovolo moulded sashes, glazed with C glass, and double-hung	
565	Superficial, 1¾-inch deal doors, framed in 4 panels, stop-chamfered, B.S., and hung	
568	Superficial, 2-inch deal doors, do., do., do.	
16	Superficial, 2-inch deal doors, plain rebated jamb-lining	
727	Superficial, 2-inch deal doors, moulded sashes, glazed and hung as before described	
147	Superficial, 2¼-inch deal doors, framed and rebated, and filled in with 1-inch rebated and beaded diagonal sheeting, the framing stop-chamfered, O.S., and hung	
48	Superficial, 2¼-inch deal entrance-door, framed same way, and hung folding	
562	Superficial, centring to door and window-heads	
3942	Superficial, centring to vaulting in basement	
1000	Superficial, centring to vaulting, groined in do.	
60	Superficial, 4-inch studd-partition	
76	Lineal, ½-inch mahogany skirting, 5 inches high, to W.C. seats	
2089	Lineal, ¾-inch deal-chamfered skirting, 7 inches high, and backing	
95	Lineal, ¾-inch deal-chamfered skirting to steps of stairs	
217	Lineal 1-inch oak mitred kerbing to hearths, 4 inches wide	
154	Lineal, 1¼-inch deal, moulded skirting, 12 inches high, and backing	

Ft.		£ s. d.
21	Lineal, 1¼-inch deal close string to stairs @	
73	Lineal, 1¼-inch mitred and moulded string to do.	
906	Lineal, 1½-inch deal fillets, 2½ inches wide, chamfered and fixed on jambs of door opens	
267	Lineal, 1½-inch deal chamfered capping to sheeting, 3 inches wide	
130	Lineal, 1½-inch deal framed bearers, 3 inches wide, under W.C. seats	
453	Lineal, 2-inch deal rebated hanging stiles, 4 inches wide	
12	Lineal, 2-inch deal hanging stile, 4 inches wide, inserted into and secured by bolts, &c., to stone jambs	
120	Lineal, 3-inch deal plate, 6 inches wide, with moulded edge	
293	Lineal, 3-inch oak sills to sash frames, 3 inches wide, double rebated . . .	
168	Lineal, 3-inch oak strutts, 4 inches wide, inserted into truss beams	
481	Lineal, deal moulded architraves, 4½ inches wide	
1591	Lineal, deal moulded architraves, 7 inches wide	
15	Lineal, deal moulded architraves circular, 7 inches wide	
963	Lineal, deal cased sash-frames, prepared for double hanging, as shown by Sketch No. .	
468	Lineal, deal cased and boxed mullions to do., as shown by Sketch No.	
84	Lineal, mahogany handrail girthing, 10 inches	
41	Lineal, oak rounded handrail, with deal balusters	
	146 Oak stop-chamfered balusters to mahogany rail	
	48 Deal cartouch brackets, fixed on string of stairs	
	207 Deal rough brackets, under steps . .	
	2 Deal seats to privies, 5 feet long, with clamped and hung covers, bearers, &c. .	
	7 Holes cut in privies, and W.C. seats . .	
	1 Dormer window, including lead flashings, as described in item No. 3 . . .	
	8 Oak ring heads, 12 inches by 10 inches, by 3 inches, and inserted into truss beams .	

SMITH AND FOUNDER.

Ft.		£ s. d.
774	Superficial cast-iron sashes, glazed, painted, and fixed into stone dressings, as in item No. 104 . . . . @	
450	Lineal cast-iron, 4-inch diameter, down pipe, and fixing	
12	Lineal cast-iron, 3-inch do. . . do.	
132	Lineal cast-iron, 5 inches by 4 inches, by ¼ inch thick, eaves' gutter, do., . do.	
11	Lineal cast-iron, 4 inches by 3 inches, by ¼ inch thick, do. . . . . . do.	
23	Wrought-iron area railing, as described in item No. 164 . . . . . do.	
91	Wrought-iron handrailing to steps . do.	
340	Cast-iron ridge covering, as described in item No. . . . . do.	
	10 Cast-iron hopper heads, and 10 shoes to 4-inch pipe . . . . . . do.	
	2 Cast-iron hopper heads, and 2 shoes to 3-inch pipe . . . . . . do.	
	18 Cast-iron perforated air-brick, 9 inches by 3 inches . . . . . . do.	
	37½ Pairs 4-inch cast-iron butt hinges do.	
	39 Pairs 3-inch do. . . . . . do.	
	123 Pairs 2½-inch do. . . . do.	
	7 Pairs 2½-inch brass butt hinges . do.	
	168 Pairs 1½-inch wrought-iron backfold hinges . . . . do.	
	8 Pairs wrought-iron strap hinges, value 4*s.* each . . . . do.	
	21 Pairs wrought-iron spudds and rings to door frames . . . . . . do.	
	33 Pairs brass shutter knobs . . do.	
	7 Pairs black ball do. . . . do.	
	204 Pairs pulley boxes, with lines and weights . . . . . . do.	
	40 Wrought-iron shutter bars . . do.	
	106 Sash fasteners . . . . . do.	
	8 Wrought-iron balusters to stairs . do.	
	8 Wrought-iron turned newels to do. . do.	
	18 Thumb latches . . . . . do.	

Cwts.	Qrs.		£ s. d.
		16 Set of b-bl. furniture to doors, and fixing	
		6 Foot-scrapers, value 5*s.* each . . do.	
		1 Set of fastenings to entrance door, val. 5*l.* do.	
		58 Locks to all doors, value 5*s.* each . do.	
		4 Cast-iron soot-doors, fixed in flues, 12 inches square	
		21 Casements, made to open with lines and pulleys, as described in item No. 142	
		7 Door-frames, secured to stone jambs by bolts and nuts	
8	3	Wrought-iron in straps and bolts to roofs and truss girders	
25	0	Wrought-iron in area gratings	
4	1	Wrought-iron in chimney bars	
		Bell hanging, as provided for in specification	
		Hooks and eyes, and small fastenings, do.	

SLATER AND PLUMBER.

Square.	Ft.		
57	11	Superficial Queen ton slating, laid on sawn laths, with three nails in each slate, and thorough rendered	
38	73	Superficial Queen ton slating, exclusive of laths and rendering	
	131	Lineal 1-inch lead supply-pipe to W. Closets and small cisterns, and jointing	
	116	Lineal 4½-inch lead soil-pipe to W. C., do.	
	36	Lineal 1½-inch lead overflow-pipe to small cisterns	
	470	Lineal soldered joints in cisterns	
		5 Pan water-closet apparatus, as described in item 121, fixed complete	
		3 1-inch ball cocks and jointing, to supply pipes in small cisterns	

Tons.	Cwt.	Qrs.		
7	15	0	Milled lead in gutters, valleys, flashings, and lining to cisterns, &c.	

PAINTER.

Yds.	Ft.		
3278		Superficial painting, 4 coats in oil, finished plain colour	
312		Superficial painting, 4 coats on sashes, measured B.S.	

Yds.	Ft.		£ s. d.
780		Lineal painting, 4 coats on skirtings @	
202		Lineal painting, 3 coats on eaves' gutter and down pipes	
113		Lineal painting, 3 coats on ridge covering	
38		Lineal painting, 3 coats on railing to steps and areas	
		10 Hopper heads, and 10 shoes, painted 3 coats	
		6 Foot scrapers do.	
		2 Area gratings do.	

PLASTERER.

Yds.	Ft.		£ s. d.
627		Superficial 2-coat plastering on walls of basement, and 1 coat of lime wash on do.	
438		Superficial 2-coat plastering on vaulting of do.	
1492		Superficial 3-coat on walls of sitting and bed rooms, floted, and set in putty	
614	6	Superficial 3-coat on walls of halls and staircase, floted, and grey coated for painting	
1160		Superficial 3-coat rough stucco lined in imitation of ashlaring on walls of chapel, &c.	
1419		Superficial 3-coat lath and plaster on ceilings, floted, and set in putty and plaster	
	1307	Lineal moulded plaster cornice girthing 12 inches	
	1537	Lineal moulded plaster cornice girthing 8 inches	
	1017	Lineal cement arrisses on internal quoins	
	524	Lineal plaster arrisses on arches (*labour only*)	
	142	Sash and door frames bedded and pointed	

ABSTRACT.

Mason and bricklayer
Stonecutter
Carpenter and joiner
Smith and founder
Slater and plumber
Painter
Plasterer

The quantities for the whole of the Asylum were made out in divisions, consequently the terms used and the system followed were the same in each. This division is sufficient to explain the method pursued.—T. L. D.

Specification of the New Prison, Tothill Fields, Westminster. ROBERT ABRAHAM, *Architect*, 1830.

EXCAVATOR'S WORK.

General Provision.—The Contractor is to execute all the works within the department of the excavator, and to find proper workmen, and all the necessary engines, pumps, troughs, planks, braces, struts, barrows, and all other materials, implements, and utensils of whatever kind or description, required in the excavation of the ground for the proposed buildings, gateway, lodges, and boundary-walls, in forming in the best manner a foundation of concrete under the same, in filling in the ground on the whole area within the boundary-wall, made up and levelled as proposed by the various designs now exhibited for the intended new Bridewell and House of Correction, and to keep constantly employed a sufficiency of carts and trucks as may be required.

The principal of the above works are stated in the following detail :—

Digging.—The ground for the boundary-walls surrounding the Prisons is to be dug out with sufficient slopes to the depth of 5 feet from the mean level of the stratum of sand or gravel, or 11 feet 6 inches under the level which is marked upon the sections, and south-boundary fence as the highest tide-level, so as to admit of the concrete foundation being formed under it to the level and to the width and slopes shown upon the sections.

All the space within the boundary-walls (with the exception of the octagonal court-yard in the centre of the ground, except so much as is necessary for getting in the foundations of the buildings which adjoin the court-yard), is to be cleared of the garden-mould and other soil, down to the stratum of sand or gravel which is generally found at the depth of about 3 feet under the surface of the ground, or about 6 feet 7 inches under the highest tide-level, as shown by sections.

The *excavations* for all the *sewers*, *drains*, *cesspools*, and other works appertaining thereto, of the necessary dimensions and falls, are also to be performed by the Contractor as directed.

The *earth*, which shall be excavated as above, is to be carted into the octagonal court-yard, or where the same may be ordered within the boundary-wall, or on the outside thereof, for the purpose of raising the ground as high as directed, and also next Francis Street to form the levels agreeable to section.

The ground so excavated, unless to be again removed, to be laid in thin courses, levelled and properly consolidated, by being carted over and well rammed, pounded, and by such other means as shall be hereafter directed.

An *engine-well* is to be sunk by the Contractor, near the middle of the ground or where directed, for the purpose of draining the water from the foundations while the same are being got in, and keeping the water from the concrete until the same is perfectly consolidated. The well is to be 6 feet in diameter, sunk to the depth of at least 8 feet below the level of the concrete under the boundary-wall, or 19 feet 6 inches below the highest tide-level, with a stout kerb and brick-steining, the bottom of the same to be planked.

Also to provide, and fix, and keep constantly at work a good low-pressure *steam-engine*, of the power of at least 8 horses, to which are to be attached pumps of a proper size for pumping out the water drained into the engine-well, from the sites of the buildings and boundary-walls, to the depth of at least 5 feet below the bottom of the concrete under the boundary-wall, or 16 feet 6 inches below the highest tide-level, and also for the purpose of grinding the lime for the concrete, with a temporary engine-house and shed over, also over the mill-stones for grinding the lime.

The *water* to be kept clear of the concrete until the footings of all the buildings and walls, and the several drains, cesspools, and other works under ground, are completed, and for the period of one month after the completion of the same, or until the Surveyor shall have certified that there is no necessity for continuing the same.

The Contractor is also to provide from time to time all such good and approved ground as may be necessary to raise the octagonal court-yard, the airing-grounds, the yards, the areas, the roadways, and every part within and round the boundary-walls, that may be required, and to cart, wheel, and otherwise convey the same from time to time to such parts as may be directed, well ramming and levelling the whole according to the several heights, levels, or currents, as shown in sections.[*]

All the *ground, road drift,* sand, loam, or brick rubbish brought inside the boundary-wall, are to be of a clean, dry quality; and in case any objectionable soil, dirt, or improper substance whatever should accidentally be brought in, the same is to be immediately removed, and ground of a proper quality to be introduced.

And in the event of more ground being brought in the premises than may be required, the same is also to be removed and carted away, with such rubbish as may be accumulated by the works from time to time.

And at the conclusion of the business, all the interior of the prisons, dwellings, offices, areas, court-yards, and every part of the premises to be left free from rubbish, and perfectly clean in every respect.

To *fill in* all the old sewers, drains or bogs, which may be found on the premises. The roadway in Francis Street and Francis Place, along the whole frontage of boundary-wall, to be raised from time to time to the proposed level of Francis Place, and the roadways in all directions to be kept up and made fit for the approach of passengers on foot or otherwise.

The Contractor, in case it should be necessary to excavate for artificial foundation below the proposed dimensions for buildings or trenches, to be paid by the yard-cube, at the price specified in the list of prices hereinafter set forth.

ARTIFICIAL FOUNDATION.

General Provision.—The Contractor to find all machines, scaffolding, planks, strutting, shores, rammers, barrows, measures, and all necessary tackle, materials, and implements for carrying into full effect the forming a good, substantial, and proper foundation under all the several buildings, walls, and parts required and shown by plans to be executed, and to effectually prevent the water getting into the foundations during the execution of the works, and such other periods as have been described in the excavator, and to keep constantly employed all trucks, carts, &c., as may be necessary.

Concrete.—The Contractor also to provide best *sharp Thames coarse gravel,* free from all loamy or other impure mixture (and if with too great a proportion of sand, the same to be screened from it), to be carted to the ground for the purpose of being mixed with best Merstram or Dorking lime, in the proportions and substance hereafter described, and forming a concrete body under the whole of the boundary-walls, and under the whole area within the boundary-walls, excepting only the octagonal court-yard before described, agreeably to Drawing No. 4. The concrete is to extend 6 feet outside the plinth of the boundary-wall, and also 6 feet within the plinths of the walls, the buildings and steps next the octagonal court-yard; and the slopes are to extend on the base in the proportion of 1½ horizontal to 1 perpendicular, except as shown by section on Drawing No. 4, below the boundary-wall.

The ground to be rammed in solid round the whole of the slopes of the concrete next the octangular court-yard and boundary-wall.

Provide *stone-lime* from Merstram, Dorking, or from elsewhere, if of equal quality and approved by the Architect, grind the same to a powder in a mill worked by the steam-engine or by horses. Mix $\frac{1}{9}$th of lime, after being ground in a fresh and pure state, with $\frac{8}{9}$ths of gravel and sand, to form the *Concrete* or substratum.

The *materials* above described are to be well mixed without water by manual labour, and then a sufficiency of water is to be added, and the substance is to be thoroughly worked and mixed together by manual labour, in which state it is to be pitched or thrown from a height of at least 3 yards above the stratum in all stages of its formation, and then to be immediately puddled and trod down by men constantly employed in the works, to level, combine, and properly cement the whole together. The *depth* of all the concrete or artificial foundation under the boundary-wall is *to be nine feet*, and to the whole area within the same, excepting only the octangular court-yard and the parts sloping throughout are to be of a substance or thickness not less than 7 feet. Under no circumstances is the lime to be mixed with a greater quantity of gravel than can be used in a proper state, nor is a larger quantity to be pitched or thrown in one place than a depth of from 9 to 12 inches in thickness, which is immediately to undergo the aforesaid process of puddling, levelling, and kneading down, and by a succession of raisings or steps, the whole thickness required shall be formed so as to become one solid mass or stratum, fully equal to support the superincumbent weight intended to be placed thereon. The *upper surface* is to be made perfectly level, and grouted with hot lime and sand upon the foundation-walls being commenced.

In the event of any part of the artificial foundation being insufficient or unsound from improper materials or workmanship, from the neglect of water-courses, or from any other causes whatever, all such parts are to be taken up and re-executed in a good and sound manner to the satisfaction of the Surveyor. No concrete being intended under the main sewer in Francis Street, if such should be required, it will be an extra.

No excavation will be allowed to be made for gravel on the premises, nor will any belonging thereto be permitted to be used.

Provision.—To provide 4000 cubic yards of artificial foundation or concrete, more than shown by drawings, to be used where directed in octangular court-yard, or under the drains, cesspools, and sewers.

BRICKLAYERS' WORK.

(*All Parts coloured Red on Plans and Sections denote Brickwork.*)

Execution of Work.—The Contractor is to execute in a good, sound, careful, and in every respect workmanlike manner, with the best materials of every description (as hereafter described), all the bricklayers' work to the whole of the Governor's and other houses, prisons, infirmaries, lodges, offices, division, boundary and area-walls, cellars, and all and every description of work shown on the various plans and drawings submitted or described in this specification, and to the working or more explanatory drawings to be furnished in elucidation thereof, to the full extent and purpose of completing in all and every respect the several external and internal walls, foundations, piers, arches, chimney-breasts, shafts, spandrils, trimmers, bridgeways, sewers, drains, cesspools, and all other work necessary to be done, agreeably to the dimensions, heights, and thicknesses shown by drawings.

The *scaffolding, platforms, and ladders* necessary to be provided, are to be of the best and most substantial description, to insure the safety of the workmen, and for the due performance of the bricklayers', masons', carpenters', plumbers', smiths', and other works, and for the necessary inspection thereof by the Surveyor, as shall be ordered from time to time by the Clerk of the Works, which said scaffolding is to be repaired and to be kept in a perfect state of repair during the performance of the whole works, after which the same is to be carefully taken down. A double scaffold of sufficient strength is to be erected to the entrance gateway, and where required or directed.

The *grey stocks* are to be obtained from Cowley or Hammersmith, and to be of the best description, hard, well burnt, and perfectly sound, of an even colour, and equal in size. If stocks from any other source are allowed to be used, they must be equal in every respect to those above described, and of washed clay. In consequence of the great quantity of bricks required for the erection of the Bridewell, it is very probable they will be obtained from various places, which will occasion a difference (though perhaps slight) of size and colour ; it is therefore to be understood that no building or wall is to be commenced (above the intended ground-level) with bricks of any clamp, that will not furnish a sufficiency for its completion; so that any individual building or wall may have uniformity of colour and size of bricks throughout. All soft, unsound, ill-burnt, or samel bricks, or any less than whole bricks, will not be permitted to be set down on the premises; but in case any inferior bricks should be found on the premises, the same are to be immediately conveyed away, or if used the work will be required to be taken down, and rebuilt in an efficient manner with sound and proper materials.

The *marlm paviors* are to be sound, of a hard quality, perfectly square, and regular in size as can be made. No brittle, or clinker-burnt, or any less than whole bricks will be allowed to be delivered or used. The *marlm stocks* are to be what are termed seconds, of an uniform bright colour, of the same size as the grey stocks, and the best that can be procured in London and its vicinity. No bricks are to be used, particularly marlms, which throw out saltpetre, or other matter, upon the surface when made use of. The white-brick paviors for prison-cells are to be procured from Ware, Dorking, or elsewhere, in size 8½ inches long, 4 inches wide, and 2 inches thick, of a sound, very hard, and good quality. The cutters to all the external arches of the governor's, matron's, and turnkey's houses, are to be of the very best kind.

The *limes* delivered on the premises are to be stone limes, the best of their respective kinds, in a quick and perfect state; that used for the artificial foundation is to be obtained from Merstram or Guildford, Surrey; that used for the brickwork is to be obtained from Dorking, Surrey; except the blue lias stone lime from Dorsetshire, which is to be used in all the foundations and walls up to the level of top of plinths. In case a greater quantity of lime is delivered than from any cause can be compounded or made use of in its quick state, the same is to be taken away and fresh substituted.

The *sand* is to be the best that can be procured from the River Thames, from such parts, either above or below bridge, most approved of by the Surveyor, and the whole is to be well washed from its impurities. No excavation will be allowed to be made for gravel or sand on the premises, nor any belonging thereto will be permitted to be used.

The *cement* commonly termed Roman cement, is to be procured from some known manufacture of repute, to be of the best and most prime quality, and delivered on the premises, from time to time, in a fresh state, as the same may be required for use. If, on inspection by the Clerk of the Works, any cask or casks of cement should, in his opinion, be of a spurious or doubtful quality, or from any cause be spoiled, the same is not to be used, but the whole to be immediately removed from the premises.

The *mortar and blue lias cement* for all brickwork to be composed in the proportion of one of lime to three of sand; and for the half-substance of all external walls, to insure a neat joint, in the proportion of one of lime to two of sand. The Roman cement composition is to be of an equal quantity of cement and sand.

Measures, each to contain one hundred of lime, to be used for the purpose of accurately measuring the proportions; and the Clerk of the Works to be furnished with bills of parcels of all the lime brought on the premises, and, in the event of a less quantity being used than stated, the amount of omission to be deducted. The lime and cement are to be kept under sheds waterproof; workmen properly qualified are to superintend the making up of the mortar: which, if made in pug mill, is to be wall chafed and tempered by manual labour, to effectually combine every particle of lime in equal proportions with the sand.

To *bricknog* the timber for framing, pedestal high, in chapel, also quarter partitions, top of male and female staircases, and under galleries, with stocks in cement. The *footings* throughout the building are to be worked with *marlm paviors and Roman cement*.

Bond Courses.—The prisons and governor's house are to have a double course of brickwork, where directed in each story, worked in good stocks and Roman cement, as a bonding to the several external walls, excepting to the external faces.

The *flat arches* over the ceilings of ground story, principal story, and chamber story of governor's house—the ground story of matron's and principal turnkey's houses—those in the prison and infirmary buildings over the ground, one and two-pair stories (except where stone landings are described)—the arches over passages leading from sunk areas to warm-air stoves in sunk stories of the several prisons, and all inverted and other arches (that may be ordered to discharge weight over or under openings), are to be worked in *marlm paviors* in Roman cement.

The *arches* over sunk story are to be turned with hard-picked stocks and Dorking mortar, except those very flat, which are to be turned in cement. All the arches to have the spandrils neatly cut, and filled in solid with brickwork as high as necessary for paving and sleepers. The arches to be correctly turned, each course lined out on proper centres, and worked to a close joint and good bond, in separate half-bricks; the points of quoins and skew bricks to iron beams are to be gauged out of hard marlin paviors; the soffits are to be cleaned off after the removal of centres, and neatly pointed with good pointing mortar. Fascias are to be worked at the springings of all arches in prisons and infirmaries in Roman cement. The external face of all work, where marlms are not described, to be executed with picked stocks, of a uniform colour and size; the perpins to be fairly kept, and the joints accurately struck by the bricklayers (not by labourers), with a proper and approved jointing tool. The governor's, turnkeys', and matron's houses above plinth in sunk areas, and the external face of boundary wall next Francis Street, including return cants, are to be faced with second *marlm* stocks, worked very close and with as accurate perpins as can be made without gauging. The inside work to prison buildings, and where walls are not intended to be plastered, are to be worked fair, and the joints neatly struck with a jointer and rule. The several walls below level of court-yard are to be executed in English bond, except the third and fourth lower courses of foundations, which are to be herring-boned.

Bond.—The whole of the works above level of court yard to be worked in Flemish bond, the heading courses to *marlm facings* are to be whole bricks and king closers, to be properly cut when required to groins and apertures. The height of the courses of brickwork depending on the gauge of the bricks; the mortar in four joints, not to exceed in thickness one inch and an eighth.

The *brickwork* is in no instance to be commenced on the artificial foundation, until ten days after the same is completed; nor is any wall to be carried up more than half-scaffold high, without completing the external and internal walls all round to the same height. The whole to be worked accurately to a perfect level bed and perpendicular face (except where sections show walls are to be built to a diminished thickness at top), and all the quoins and works to be at right angles; to effect which, a sufficiency of levels, plumbs, bobs, and triangles, are to be in constant use.

All the *reveals* to internal and external apertures to be exact, in respect to their vertical or horizontal dimensions, and all inverted and other arches to be accurately worked. The inner and crop-joints of all brickwork are to be well flushed the whole substance of walls, and grouted with quick Dorking lime and sand, in a liquid state, of a good quality; the work below ground-floor line is to be grouted every third course, and above, as shall be deemed necessary, completely cleansing the external face if blemished thereby. All the work below ground is to be worked with whole bricks, and not anything less than half a brick will be allowed to be used anywhere, except as closers. The arches for gratings in foundation walls to be turned in three half-bricks. The circular bows, areas, &c., are to be worked by moulds to proper radii, and all openings to be splayed off inside.

The *flues* to be constructed with great care, and to be carefully worked; well parget the same smoothly, to a proper gauge, 13½ inches × 9 inches, except the kitchen and other flues, which are ordered to be 13½ inches square.

Convey the flues, with any extra projections required, to their respective shafts, shown by roof plans, and work up the shafts agreeably to drawings. Properly set the grates, provided at the expense of the Commissioners, in the day-rooms to the several prisons, infirmaries, governor's, and other houses, lodges, and offices; also the five coppers in bath-room and sculleries, and have the whole of the chimneys free from smoke. Prevent the draft of one flue not used to the governor's, matron's, and turnkeys' houses, drawing down the smoke from another flue, without altering the general appearance of shafts in any respect whatever. Provide additional smoke-flues, as directed, for warm-air stoves in each prison; also circular flues, with patent glazed bricks, 12 inches diameter, neatly and accurately worked, to convey the warm air into each story of the prisons, leaving cavities, as directed, for gratings and pateras between passages and the several cells.

Build solid *foundation walls* under all kerbs, slabs, and the lower steps of staircases; and where steps are to be tailed into walls, the brickwork is to be worked dry, so that but little injury may arise in cutting out for the steps when fixed by the mason. Make good to the same in a neat and sound manner.

Pave with bricks flat in mortar the cellars of the governor's, matron's, and turnkeys' houses.

The *boundary* and other *walls* are to have piers, as shown on plans, with footings to accord with walls. Build walls for sleepers and other timbers, fenders for slabs to chimney openings, and trimmers where required. Back out all the stonework where required, in a sound manner, and neatly point up with cement where stone and brick connect.

Pave all the cells to the several prisons on brick arches and spandrils with white brick paviors, before described, laid on edge herring-bone, and well bedded in cement; the joints flushed and neatly pointed; no joint to exceed a ¼ of an inch in width.

Splay all reveals to windows of dwelling-houses, and wherever deemed necessary. Work in the several iron and stonework, and other works described in the respective trades; also the pateras, tubes, and gratings, where required to disperse warm air throughout the cells and passages. Cut all skew backs for arches, or prepare the same when the buildings are being carried up; also all splays, birds'-mouths, indents, and weathering, where required. Bed in cement all the bond, plates, ties, and lintels.

MASON'S WORK.

(*The Stonework shown on the Plans and Sections is distinguished by a stone-tint dotted.*)

Generally.—To execute the whole of the *Masonry* in a good and most workmanlike manner, using the best quality of stone, hereafter particularized, to be procured from the several quarries most approved, and of good and sufficient scantlings, perfectly sound, free from flaws, sand-holes, vents, shells, or other bad qualities, and no stone but what is unexceptionable, and the hardest quality of its kind, is to be brought on the premises, under any pretence whatever.

The *common stone* is to be from *Dundee, Scotland.*

The *Yorkshire* stone, from Bramley Fell, near Leeds, Green Moor, near Pennistone, Cromwell Bottom, or Bradford, or any other quarry most approved by the Surveyor, and when used in the works to be laid on their natural beds. The stone, if worked in the quarries, to be delivered without defects, or, if necessary, to be reworked on the premises.

The *Portland stone* is to be of the bird's-eye, or grey, quality, and sound, and in large or scantling stones.

The *granite stone* is to be from Aberdeen, in Scotland, Heytor or Dartmoor in Devonshire, or any other approved quarries; the whole to be of a sound and perfect quality, and the very best of their respective kinds, perfectly free from defects.

Sizes of Stones.—All the stones used in plinths, strings, cornices, blockings, kerbs, copings, ashlar, and other continued work, are to be of a good length—at least 4 feet on the average—and of the scantlings shown on the drawings. No stone less than 2 feet 9 inches long is to be used, unless the dimension requires it. Provide a sufficiency of *bond stones* in plinths, ashlar fascias, and principal entrance-door dressings, and other works, as hereafter described.

Work.—All the beds and joints of granite to be picked fair, to form a close, good joint. The other stones—Portland, York, &c.—to be sawed, tooled, or worked fair and out of winding, the whole set perfectly solid and level, and the joints and faces true in respect to perpins.

The *faces* of all works, that are visible, are to be picked or tooled fair, according to the quality and usual mode of working the several descriptions of material in all instances. The labour to be good of the kind, and as expressly described hereafter. The tooled work to be of a large gauge. All the upper surfaces to projections of cornices, copings, sills, strings, plinths, and other work, to be well weathered off, under-surfaces to be deeply-throated, and the arrisses in all cases to be preserved, according as directed by the Surveyor; and all such masonry shown by drawings, or described to be moulded, is to be executed in a clean and accurate manner.

Staircases.—The steps, winders, and landings to staircases, and sills of doorways, are to be properly faced, as approved, and to be of solid stone, except governor's staircase, from hall to chapel.

All the risers to be rebated on treads, and well pointed with Atkinson's cement. The lintels, sills, and jambs of inside doors to be common-tooled on face, and both edges rebated for double doors, and worked out behind to form indents for brickwork. Each jamb to be in one stone.

All the *paving and channels* to be well squared every edge, not pitched or bolstered off, and laid solid to such currents as are directed; the whole to be well bedded in Dorking mortar, and pointed with Atkinson's cement. The stones are to be 3 feet long on mean, and gauged to one width, laid in courses, the joints well broken. The ground to be well rammed and made solid long before any paving is laid, except where the paving is laid on brickwork; and in the event of the ground sinking, the paving is to be taken up and relaid, so often as it shall be necessary, until the whole of the same, also the channels and kerbs, lay firm, with currents at least 1½ inch to 10 feet, and made perfect in every respect.

Execution of Work.—All the masonry to be hoisted and set in the most careful and workmanlike manner; such stones as are of magnitude to be hoisted and set with proper tackle, the whole to be well bedded in good Dorking mortar. Provide all tackle, cranes, gears, rollers, implements, and tools of all kinds, for the necessary execution of the work, particularly the large stones over entrance porch, which are to be most carefully hoisted and fixed.

Cut all throatings, groovings, sinkings, channels for plumbers, smiths, and other workmen, to securely fix the work; bed with bond-stones through wall, one over each pier; the *quoins* to be of scantling stones, sunk on face.

The *cornice* above the frieze to be of *Portland stone*, 18 inches in height, and 4 feet on bed, sunk and moulded agreeably to section. The stones to be all scantling sizes, except where flues interfere, in which case ashlar 9-inch bed is to be introduced.

The raking portion of cornice over tympanum to be of Portland stone, 6 feet on bed, worked as drawing; each stone to be of scantling size, the saddle-stone to be 9 feet long and 6 feet wide, sunk and moulded in all respects agreeably to drawing.

To *weather* off the top of pediment cornice, so that the wet shall run into gutters; cut all the necessary grooves for lead flashings, and work fair the back edges, which are to show as coping above lead; the whole to be very securely fixed, with all necessary iron dowels, cramps, and corkings.

Form the *gutters* above cornice, round the building, with Portland sides, the outer one to show as a blocking course to cornice, and to be 17 inches high above cornice, 4 inches on bed, and 3 inches on top, let into cornice 4 inches, well secured with strong iron L straps, each stone well plugged or rebated at joints; the inner side of gutter to be of Portland stone, 3 inches on bed, 21 inches above gutter in height, let 3 inches into cornice, plugged or rebated at joints. The sides of gutters to have grooves for lead flashings, also for iron-perforated drifts and slate bottoms. The whole to be put together in a sound and effectual manner, so that in the event of any overflow from the drips or gutters, the water may pass through the perforations made under the openings in blocking-course, or above the blocking-course, on to the weathering of cornice, and drip away from the building. Provide good 2-inch Yorkshire stone, gauged to a thickness, to be used where necessary in the flues required to be gathered in quickly.

Chimney Shafts.—The caps to be of Portland stone, 12 inches in height, and to bay all over shaft, with 4½-inches projection, the flue-holes are to be cut out. Weather off the top of caps, cut away the cornice for cisterns, and cistern-heads, and let in iron-ties and shoes for trusses.

Prepare and fix the architrave moulding round clock 12 inches on face, moulded, and the whole substance of wall on bed.

Sills.—Provide and fix to all the windows Portland-stone sills, 8½ inches in height, exclusive of drip, and 15 inches on bed, weathered at top to throw off wet, and throated under projection.

Door-steps.—Fix in all the external doorways of ground-story and principal story, Heytor granite stone-steps, fine picked top, and rise 7 inches thick, sunk out to receive paving, to show 6-inch rise, to be the whole width of walls, on bed weathered for drips.

The *steps of porch*, ground story, to be of Heytor granite, 14 inches × 7 inches, to show 12-inch treads and 6-inch risers, rebated and set solid on brickwork, with rounded ends. Pave the inside of porch with 4-inch Heytor granite paving. The double flights of steps leading up to entrance of principal story, to be prepared and fixed, agreeably to drawing, of prime picked Portland stone, worked on face and ends; the steps to be solid out of 13 inches × 7 inches, and rebated to show, when finished, 11-inch tread and 6-inch risers. The quarter spaces and landings to be of Portland stone, 7 inches thick, worked fair; all faces as the steps to show 6-inch rise, joggled at joints. Neatly cut and pin all the steps and landings into ashlar at least 9 inches. The pedestals to the lower steps to be of solid stone.

Kerbs of Heytor granite on all the walls of steps, quarter spaces, and piers, 15 inches × 9 inches, as drawing, worked three faces, with weathered top.

Facings.—The front and return walls to support steps to be cased with Heytor granite ashlar, except where brickwork, 9-inch bed, with bonders every 7 feet through wall, and have solid jambs, mantels, and lintel to porch 15-inch bed; also plinth 18 inches high, and 15-inch bed; the whole worked fair as ashlar above steps. Cut grooves in the plinths, strings and fascias for the rain-pipes. The cornices are to be sunk for the reception of the iron shoes of tie beams, as represented in the sections.

INSIDE OF GOVERNOR'S HOUSE.

CHAPEL.

Paving.—The passage-way in front of iron railing to enclose prisoners' landings and passages next staircases, to be laid with 3-inch Yorkshire picked paving, rubbed on face, in large courses, on brickwork. The air gratings to be neatly let into paving, and rebated.

Neat Portland *chimney-piece*, with shelf and slab, to robing-room. The *Steps* leading down to bridge from centre portion of chapel to be of Yorkshire stone, 10-inch treads, 6-inch rise.

CHAMBER STORY.

To fix up neat profile *Portland chimney-pieces* to all the openings, agreeably to drawings, with bed moulds and shelves properly backed with solid grounds and Yorkshire bars; lay 2-inch Portland slabs and 3-inch Yorkshire back hearths.

Paving.—The passage, galleries, and landings, also water-closet, to be laid with 3-inch Portland paving in courses, and lay in all the doorways solid Portland steps, 18 inches × 6 inches, properly faced and jointed.

PRINCIPAL STORY, PASSAGES, AND STAIRCASES.

Pave the office room, entrance hall, passages, water-closets, and all parts not described to be floored, with 4-inch *Portland paving*, properly faced and jointed; the centre courses to be of scantling sizes, firmly laid on brickwork bedded in mortar, and jointed in Atkinson's cement. Lay in all the doorways solid *Portland steps* the width of walls, and 6 inches thick, fair on face, and back-jointed.

The *staircases* from principal story up to chapel to be prepared, agreeably to the drawings, out of prime Portland stone; the steps are to be bevelled, to be laid into walls 9 inches, to show 12-inch treads and 6½-inch risers, rebated together, and worked fair all round and ends. The *half spaces* and *landings* to be 7 inches thick, rebated to 6½-inch risers.

Chimney-pieces.—To prepare and fix up black, dove, or veined marble chimney-pieces, as shall be approved, to the three principal rooms, of equal value to drawing, with shelves, bed moulds, and solid profiles, pilasters, and slips, worked, polished, and fixed in the best manner. Lay 3-inch Portland slabs, 30 inches wide, notched to plinths, and 3-inch Yorkshire rubbed back hearths.

To fix in the two waiting-rooms and office solid Portland profile chimney-pieces, agreeably to drawings, with bed moulds and shelves fixed complete. Lay 3-inch Portland slabs and Yorkshire hearths.

Solid Yorkshire steps and landings, to lead from passage of principal story down to the ground and sunk stories, to show 10-inch treads, 7-inch risers. Lay Yorkshire paving at the foot of staircases.

GROUND STORY.

Paving.—To provide and fix 9-inch Yorkshire landings, quarry-worked top face, where not arched with brickwork, to form the floor of this story (agreeably to plan of sunk story), laid in stones of the size indicated by blue lines; and 3-inch York paving in the other rooms, passages, and cellars, squared and laid in courses.

Granite steps from turnkey's room down to the sunk area, the side walls of steps to be formed with 3-inch Yorkshire paving.

Have proper Dartmoor granite *kerbs*, which are to be 6 inches thick and 12 inches wide, to receive iron railing.

Provide a 6-inch Yorkshire *stone sink*, 3 three feet 6 inches long and 2 feet 6 inches wide, fixed on bearers in turnkey's room.

Chimney-pieces.—Fix to the chimney openings 3-inch rubbed Yorkshire mantel and jambs, 9 inches wide, with shelves 2 inches thick, and 6 inches' projection; the kitchen chimney mantel to be haunched.

Skirting.—Fix up in passages and rooms of ground story (but not in cellars) York paving skirting, 9 inches high, rubbed and properly secured.

N.B.—The landings over scullery may be in 6 stones instead of 3, if they tail through the walls, and have joggled joints.

SUNK STORY.

Yorkshire paving, 2½ inches thick, in scullery and larder, bedded on the concrete in hot lime. Fix solid Yorkshire *steps* in doorways on the 2 lower courses of footings. On no account is any part of the brick footings to be removed or cut away in doorways without permission of the Surveyor. The *lintels* over doors, where not arched, are to be of 9-inch Yorkshire landings, laid 12 inches at each end, on brickwork the width of walls.

Ventilation.—Have openings next sunk area, and side yards in plinth for *ventilation* of sunk story, agreeably to plans and elevations.

Fix in the kitchen and scullery 9-inch rubbed Yorkshire sinks, 5 feet long and 2 feet 6 inches wide, each fixed on 3-inch Yorkshire bearers; all sinks to be dished out for air-traps and waste-pipes, and washers to be let in.

Sink Stones.—Provide and fix Portland stones, 6 inches thick, dished out and sunk for air-traps and bell-traps.

CHAPEL STAIRCASES.

The staircases for male and female prisoners from ground story up to chapel, are to be of Yorkshire stone, tailed into wall 9 inches, the steps to show 10 inches' tread, and 7 inches' rise, neatly rebated together. All the quarter spaces and landings to be full 7 inches thick, joggled at joints, bedded and let into walls as steps. Pave the bottom of staircases with 3-inch Yorkshire paving, and have solid Yorkshire wide steps in the doorways. The floor of passages next single prisons to be of 6-inch York landings, quarry-worked, to give headway to stoves. The doorways from the chapel and prison door on to bridge next convicts' prison, are to have Yorkshire stone dressings, 14 inches × 9 inches, and Dartmoor granite steps, properly worked, to show 6 inches' rise and 10 inches' tread.

The *bridge* to have a floor of Dartmoor granite, formed by long landings weathered off each side, and properly secured, rebated for iron arches, well joggled together at joints to prevent wet penetrating through, and have grooves for pipes next prison, as directed. The butments for bridge to be of Dartmoor granite, the whole substance of wall, and of the dimensions shown by sections, with proper arch-joints and sinkings for the reception of the iron-work, which is to be let in and secured in the best and most efficient manner.

PRINCIPAL TURNKEY'S AND MATRON'S HOUSES.

Being similar, it is to be clearly understood that the following description applies to both houses in all respects, except where shown or stated to the contrary.

York-stone templates for iron beams, and lintels for apertures, of 6-inch Yorkshire landing the width of walls, except outer reveals of windows; also provide good Yorkshire paving where flues gather over quickly, gauged to a thickness.

The *plinth course* to each side of dwelling, and round bow near sunk area, to be of Yorkshire stone, 21 inches high, showing 18 inches above paving, and 10½ inches' bed, with bonders in every pier or every 5 feet, through wall about 18 inches wide.

Stone dressings round inner doorway of porch, the turnkey's room doorway, and the doorway next sunk area, of Yorkshire stone, and similar in all respects, except as to scantling (which is shown by plan) to what has been before described to governor's house. The *rustics* to doorway of principal story to be of Heytor granite, 15 inches on bed and in width, agreeably to drawing, with plinth bonders and keystone, as particularly described to governor's house. The frieze of entablature to be of Portland stone, 21 inches in height, and 12 inches on bed, worked as Section, to go all round the house; the angle or quoin stones to be of scantling size.

The *raking cornice* of pediment to be of Portland stone, 26 inches in height, and 48 inches on bed, worked and moulded as drawing; every stone to be of scantling size, as described; the quoin stones to be 4 feet in front and 5 feet 6 inches on bed; the saddle piece to be 6 feet long and 4 feet on bed. Form the gutter, which will show as a blocking course round entablature, agreeably to section, with Portland stone, sides cut wedge-shape to size as drawings, let into cornice, properly secured with irons and plugs, as before directed. The sides of *gutters* to have grooves for iron drips, and slate bottoms, and to be fixed as described to governor's house. Cap the chimney shafts with Portland stone, cornice and blocking, 15 inches high, and the size of shaft on bed, projecting 4 inches all round over brickwork, throated and set with holes for flues, as before described.

Sills.—Prepare and fix to all the windows Portland stone sills, 7½ inches thick, to project 2 inches in front, and on bed to be flush with the inside of window back, properly sunk, weathered, and throated. Fix in the external doorways and lobbies of ground stories *Heytor granite steps*, 7½ inches thick, sunk to show 6-inch risers, and 14 inches on bed to show 12-inch treads.

The *steps* to entrance doorway of principal story, and also the double flights of steps and landings leading up from court yard to principal story to be of Portland stone, and the walls which support steps to be 9 inches thick, in ashlar; the lintels, door-jambs, martins, and plinth of lobby entrance, are to be of Heytor granite, the whole executed agreeably to drawing, and in a manner as particularly described to the approach of governor's house in all respects; semi-ends to lower steps.

Pave the inside of porch under steps with 4-inch Heytor-granite paving, bedding and jointed in cement. Cut holes in the cornices for hopper-heads, also grooves in plinth and fascias for rain-pipes.

The *cornices* are to be sunk for the reception of iron shoes of tie beams, as represented in the sections.

PRINCIPAL STORY.

Fire-places.—To prepare and fix Portland stone chimney-pieces to the Magistrates' rooms, agreeably to drawing, with solid profiles, jambs and mantel, 1½-inch shelves on mouldings and plinths, set with proper cramps. The slabs to be of Portland stone, 2 inches thick, and the back hearth of 3-inch Yorkshire rubbed.

Should one chimney-piece be considered sufficient in the Magistrates' room, the other openings are to be formed into cupboards as directed, and the difference of expense allowed for as an extra or omission. Fix 3-inch Portland stone chimney-pieces to the other rooms with shelves, 8 inches wide, 2½-inch Portland slabs, and 3-inch Yorkshire back hearths.

Paving.—Lay to the entrance hall and in doorways 3-inch rubbed York paving, in picked courses, properly squared, and laid on brickwork bedded in mortar and jointed in cement.

GROUND STORY.

Fire-places.—The bow or turnkeys' rooms, kitchen and bedrooms to have 3-inch rubbed Yorkshire mantel and jambs 8-inch face with shelves 7 inches wide as directed; the kitchen chimney mantels to be haunched.

Lay to the entrance passages and turnkeys' rooms, 3-inch Yorkshire *stone paving,* and 3-inch Yorkshire paving in other rooms. Have Dartmoor granite *steps* down to sunk areas, from turnkeys' room, and in all doorways, properly bedded with kerbs and sides to steps as described to governor's house.

Fix up *York sinks* in the kitchen and turnkeys' rooms, where directed, 4 feet × 2 feet 6 inches each on stone bearers, let in and pinned to wall. Cut all holes for air traps and waste pipes round ends, and have stone skirtings 9 inches high to this story.

Fix solid *Yorkshire steps to staircases* leading from principal story down to ground story, also down to sunk story, to show 10-inch treads, and 7-inch rise properly bedded, also 7-inch Yorkshire landings and quarter spaces.

Pave the foot of stairs on sunk story, also privy, larder, scullery, and every part intended to be occupied, as shown in plan, with 2-inch common Yorkshire paving in courses.

Provide Portland-stone *sink stones,* dished out for air-traps, to all branch drains, 18 inches square, 9 inches thick, properly worked on face and edges.

SUNK AREAS ROUND THE GOVERNOR'S, MATRON'S, AND PRINCIPAL TURNKEY'S HOUSES, STEPS UP TO INSPECTION YARD, DWARF WALLS, AND STEPS DOWN TO PASSAGE WAYS LEADING TO WARM-AIR STOVES UNDER PRISONS.

Paving.—To lay 3-inch Yorkshire paving in courses in sunk areas, kitchen, and other side areas with radiating joints, and 12-inch *Yorkshire channel* worked to circular wall out of 6 inches thick. Have solid Yorkshire stone steps, 11 inches on tread, 6-inch rise, up to inspection yards, well bedded and worked at ends.

Cope the circular dwarf walls of sunk areas and kitchen yards, and privies with Dartmoor granite semi-coping fair picked, 14 inches on the bed, with bevel joints. The *piers* to be of Yorkshire Bramley Fall stone, 18 inches square, and capped with Dartmoor granite, neatly worked on face, tops, and edges, cramped to circular coping. Have Yorkshire stone solid *steps and winders* to lead down to passages under inspection yards, 10 inches on tread, and 7-inch rise, well bedded and built in brickwork. *Pave* all the passages leading to warm-air stoves from the matron's and principal turnkey's sunk areas, also under the whole of the inspection yard behind the governor's house, and under the prisons as far as and including the spaces for coal-cellars, and the warm-air stoves, which are to be below the staircases, with 2½-inch common Yorkshire paving.

Provide 6-inch *Portland sinks*, 15 inches square, 6 inches thick, dished out for air-traps, and properly worked face and edges; 6 to governor's house, 4 to matron's, and 4 to turnkeys' houses. Have all necessary stonework in the jambs of doorways leading to stoves to fix iron gates and fastenings, also solid steps and lintels where required. York lintels 4 inches thick to all openings for gratings in wall of sunk areas, and sill stones for iron gratings.

WALLS OF PASSAGE WAYS LEADING TO CHAPEL EACH SIDE GOVERNOR'S HOUSE, AND ENCLOSURE WALLS BETWEEN THE PRINCIPAL TURNKEY'S AND MATRON'S HOUSES, AND THE SINGLE PRISONS NEXT OCTAGONAL COURT.

To have Dartmoor granite *Plinth* to walls next court yard, 21 inches high, showing 18 inches above paving, and 10½ inches on bed, properly picked on face, and bonded as before described. Dartmoor granite door jambs 12 inches on face, and *lintels* 18 inches deep, as drawings, to doorways and blanks, and 16 inches on bed, worked fair, three faces worked with indents for brickwork and rebates for doorcases; those next governor's house to have a greater bed.

The *steps* in doorways also to be of Dartmoor granite, to show when finished 11-inch treads and 6-inch risers.

Have Yorkshire *sills* and *dressings* to opening of inner wall, to passage leading to chapel stairs, as hereafter stated, to cell windows of prisons, and fix iron louvres and doorcase in same.

The *cornices* and *blockings* are to be of Portland or Yorkshire stone to range with those of the triangular buildings, the cornices to be 9 inches high, the blockings to show 11 inches. The blocking of passages to be 4 inches thick, the front and back walls are to have similar cornices and blockings. The fence walls to have blockings 14 inches on the bed, and cornices on both sides. Form grooves for flashings next the flats.

DOUBLE AND SINGLE RADIATING PRISON BUILDINGS AND INFIRMARIES.

Steps.—Lay to all the external doorways to prisons, magistrates' entrances, water-closets, and washing rooms, York solid stone steps agreeably to plans, properly bedded on solid brickwork, tooled at ends, to show 12-inch treads and 6-inch risers rebated together.

Floor and Ceiling.—The day-rooms on one-pair stories, passages on the ground, one and two-pair stories and single passages, are to have best 6-inch Yorkshire landings to form floor and ceilings; and the day-rooms on the ground-floor to have 9-inch Yorkshire landings, the whole to be tooled fair on both sides, joggled at joints, and pinned in at least 9 inches into the walls. The several landings are to be gauged to an accurate thickness, and laid perfectly level, and jointed with Atkinson's cement.

The day-rooms and double passages on the two-pair stories, and the galleries on the ground and one-pair stories, are to be *paved* with 3-inch quarry-worked Yorkshire paving, bedded and pointed in Atkinson's cement.

Sills.—All the internal doorways to day-rooms, cells, passages, and openings to staircases, and wherever gates are to be hung, are to have good Yorkshire sills and lintels 2 feet longer than clear of openings. The whole to be the width of wall, and 9 inches thick, rough tooled on face and edges. Each doorway to have a Yorkshire bond stone, 18 inches × 16 inches, and three courses of brickwork in height, worked all sides, and rebated for double doors with holes for lock and fastening. The external doorways to have Yorkshire sills, lintels and jambs, of Green Moor or other Yorkshire stone, the width of walls, and 1 inch extra for external projection, agreeably to drawing, the whole to be joggled together, rebated for double doors, and tooled with a bold stroke. The hinges, staples, bolts, and corkings, to be all let in carefully.

Window-sills.—All the cells and other windows are to have the best Yorkshire stone sills sunk and weathered, splayed inside, throated on the outside, also lintels and jambs, agreeably to the drawing No. 50. The inside part to be tooled, sunk, and rebated for shutters, also for sashes in the event of their being hereafter required. All the external part to be tooled with a bold stroke. Fix the iron louvres with corkings, so that they may be removable, and neatly work out all holes for screw bolts, corkings, irons for shutters, and all necessary fastenings. To fix all the iron ties described in Smith's particular, with corkings let in flush.

The *cornice* round prison buildings is to be of the best Yorkshire or Portland stone, 3 feet on bed, and 1 foot 1 inch in height, sunk out agreeably to drawing, secured by cramps and iron chain tie, let in on top with corkings over every pier round the building. All the stones to quoins to be of scantling size.

Form the *gutters* above cornice all round the prisons with best

Portland stone; the outer one to show as a blocking course to cornice, and to be 13½ inches high, 4 inches on bed, and 3 inches on top, let into cornice 3 inches, to be fixed securely with strong iron L cramps to every stone, and well plugged at joints. The inner side to gutter to be, as shown on plan, 17 inches high above gutter, plugged at joints, and well secured. The sides of gutters to have grooves for lead flashings, also for iron perforated drips and slate bottoms; the whole to be put together in a sound and effectual manner, so that, in the event of any overflow from the drips after frost, the water may pass outwards as before described. Cut holes in the cornices for hopper heads, also grooves in plinths and fascias for rain-pipes.

Cap the *chimney shafts* with best Yorkshire hard stone, 12 inches in height, as described to governor's house. Form the flues with 2-inch Yorkshire paving, where they gather quickly. Wherever the chimney jambs or flues are not brought up solid from the footings, they are to be supported by 6-inch Yorkshire stone corbels tailing through wall.

The *staircases* from ground stories to upper stories to be of good hard Yorkshire stone, 12 inches × 8 inches, well rebated and bedded to show 10-inch tread, and 7½-inch rise, fair tooled, treads, risers, and ends rough tooled underneath.

The *landings*, quarter spaces, and winders to be 7½ inches thick, tooled on top and edges, and rough tooled underneath; the whole to be pinned into walls 9 inches; the joints of landings are to be joggled. Have to the openings from passages to staircases stone archivolts instead of lintels.

The *dwarf walls* between passages and staircase landings are to have Yorkshire sills or capping to receive iron gratings the width of walls, and 6 inches thick, properly secured, and fix bond stones in walls, each side to receive the top rail as shall be directed.

Paving.—Lay to the whole of the passages where landings are not provided from the several stories good Yorkshire paving, 3 inches thick, the stones are each to be the width of passage, and not less than 2 feet; also lay to the foot of staircases, the water-closets, and the washing-rooms, similar Yorkshire paving, the whole to be bedded in mortar, the joints in cement, neatly pointed up and left perfect in all respects at the conclusion of the business.

To fix 4-inch *Yorkshire landing stones*, 7 feet high and 4 feet wide, between the water-closets and the urinals, rounded at top and edge, and secured to the wall in a sound manner. Fix up the *urinals* as shown by drawings on stone bearers out of 7-inch Yorkshire stone, properly dished out and pinned into walls. The *water-closets* to have Yorkshire stone risers under seats in one stone, each 3 inches thick.

The *washing-rooms* to have two tiers of sinks each, as plans, worked out of best Yorkshire stone and rubbed fair, laid on arches or stone bearers, the stones to be 18 inches wide out of the wall, and 10 inches high, sunk down 6 inches, rounded front edge, and let into walls 4½ inches and pinned : let in two cast-iron air-*traps* to each sink, and well flanch off to the same. Provide Yorkshire *sinks*, 6 inches thick, where ordered, 2 feet square, dished out for 12-inch air-traps. Have to the infirmaries, nurses' and doctors' rooms rubbed Yorkshire stone plain *chimney-pieces*, shelves and slabs 2 inches thick, with York back hearths.

AIRING GROUNDS AND INSPECTION YARDS.

To have best Yorkshire *kerbs* 12 inches wide, with piers or spur stones 11 inches high on walls, for railing next boundary wall, and between airing ground and visiting space, tooled and weathered all round for railing. The kerb between waiting space and inspection yard to be 1 foot 3 inches × 9 inches, piers or spur stones worked as above.

To lay *Yorkshire steps* below level of kerbs for gates each side visiting space, 14 inches × 9 inches, butting 9 inches at each end under kerb. *Cope* the division walls of airing grounds with best Yorkshire stone, 13½ inches on bed, and 12 inches in height, properly cramped with 15 iron cramps, worked as shown by drawing.

Bond Stones.—Work in where required 3 Yorkshire bond stones to piers next inspection yard and where required to receive the ends, 3 feet long, 9 inches × 6 inches, and fix on pier caps to match coping.

To *pave* the whole of the airing-grounds, inspection yards, and visiting spaces belonging to the several prisons and infirmaries from kerb next boundary walls to the dwarf walls of sunk areas, and home to the walls next octangular court-yard, except to inspection yard behind governor's house, with 3-inch best Yorkshire paving of Green Moor or other approved quality, laid in courses to a current (towards channel stones) of 1½-inch to 10 feet. To prepare and lay 14-inch best Yorkshire *channel-stones*, 8 inches thick in airing grounds and next circular wall of sunk area, except where landings are to be laid, to receive water from paving, sunk out 9 inches wide and 3 inches deep on mean. The inspection yard of governor's house is to have 9-inch Yorkshire *land-*

ings over the whole of the way to stoves, to lay from wall of sunk area to ends of prisons and walls between them, to be joggled at the joints, and bear 12 inches on the walls at each end. Form *channels* for the water in the landings, the size of these landings are shown on the Plan No. 7. The landing, paving and channel-stones before mentioned to circular portion, to have the cross joints radiating. The *sink stones* to be out of 8-inch Yorkshire stone, sunk and rubbed, also having cast-iron air-traps let in them.

THE EIGHT TRIANGULAR BUILDINGS FORMING THE OCTAGONAL COURT-YARD.

Plinths.—Have Dartmoor granite plinths to external walls 20 inches high, to show 18 inches above paving and 10½ inches on bed, worked fair on face, and weathered at top.

The *semi-arches* of windows, doors, and blanks to be of Dartmoor granite, 10 inches on bed, with key-stones to each through the wall, the whole properly faced and sunk with arch joints as drawing. The sills to be 21 inches on bed, and 9 inches deep, sunk for drips. The windows next the 4 roadways are to have similar sills, but the arches of brick. The *cornice* to be of Portland stone as directed, 2 feet 3 inches on bed, and 9 inches in height, sunk and worked agreeably to drawing.

Form the *gutters* above cornices by Portland blocking courses, of the dimensions and in the manner shown by drawings, and more particularly described to roof of governor's house.

Lay Dartmoor granite *steps* to all the doorways, as shown on plans, properly worked, bedded on brickwork, to show 12-inch treads and 6-inch risers, picked on face and ends. Cut proper mortice holes for doorcases.

Pave the inside of all the triangular buildings with inch Yorkshire Green Moor stone paving, laid in courses on brickwork jointed in cement. Provide 2 Yorkshire sink stones in each building, 2 feet square, dished out and let in traps to prevent effluvia.

Sinks.—Fix up where directed in the above buildings, on solid brick arches, 4 sinks, each 7 feet long and 2 feet 6 inches wide out of the wall, and 10 inches deep, sunk out 4½ inches besides the current, let in the waste-pipes, and air-traps at each end, round off corners, and securely pin in the whole at least 4 inches.

The *four roadways* between triangular buildings leading to rear of prison from octangular court-yard to have Dartmoor granite bonders to piers at angles next the court-yard, and at the other ends of the 4 roadways, making in number 16 piers, to receive *iron gates* (though only 6 pairs of gates will be hung at first), with caps and plinths agreeably to drawing, having two *spur stones* to each gate 5 feet long, each 9 inches × 9 inches at bottom, and 6 inches × 6 inches at top, with iron staples let in. Have Yorkshire stone sills under the gates on brickwork, 2 feet wide and 18 inches thick, to receive the gates, worked and fairly picked on external faces in large stones, as directed, well cramped together with 18-inch strong iron cramps; also fix Yorkshire stone plinths 10 inches × 9 inches on brickwork, well cramped to walls to receive gates on footway leading to chapel.

Paving.—Pave the footways with Dartmoor granite paving 4 inches thick. Pave the roadway from front of triangular buildings to external quoins of single prisons with Dartmoor granite squares laid to 12 inches' gauge and 6 inches deep in mortar to proper current, as before directed. For the mode of carrying flues of these buildings, see the description of the prison buildings. Have piers for gates next ways to chapel of Yorkshire stone, 2 feet 3 inches square, with plinths, caps, and blockings, also sills and spur stones as to the granite piers above mentioned.

LODGES EACH SIDE ENTRANCE PORCH.

The *plinth* to be of Dartmoor granite worked fair, the same scantling as the plinth before described to the triangular buildings in front, next court-yard. The return ends and external parts next porter's yard, to be of Yorkshire stone of similar scantling.

The *dressings* to all the windows, doors, and blanks, the steps in doorways, the sill courses, cornices, and blockings to gutters of roof all round, to be of similar stone of the same scantlings and workmanship as before particularly described to front of triangular buildings. Have also *steps* internally of York quarry-worked stone to show 12 inches × 6 inches, also spandrils and landings of Yorkshire stone 3 inches thick, quarry worked and properly bedded. The windows next the porter's yards are to have sills of Yorkshire stone 9 inches × 4 inches, quarry worked and throated, but no archivolts of stone.

Cap the chimney-shafts with Yorkshire stone 8 inches thick, and cut out the flues as directed to other chimney-shafts. Lay to the inside of porter's rooms, store-rooms, office, passages, admission and examination rooms, bath-rooms, lobbies, privies, dead houses, and all the yards, 3-inch Yorkshire paving on brickwork in courses. The paving of yards is not to be laid on brickwork. Dish out of 6-inch Yorkshire stone, 2 feet square, sink stones for cast-traps, and rub the same as before described.

Fix up rubbed Yorkshire *chimney-pieces* to the porter's room and office, the jambs and mantel 7 inches wide, and the shelves 6 inches wide out of wall, properly cramped with iron cramps. The seats in examination room to be of Yorkshire stone 12 inches wide, rubbed on top and rounded on edge, fixed on stone bearers.

Sinks of rubbed Yorkshire stone, 5 feet long, 2 feet wide, and 9 inches thick in examination room, with 2 air-traps let into each, fixed on stone bearers with rounded ends properly pinned into wall.

The *baths* to be formed of Portland stone; the bottoms, ends, and sides to be 4½ inches thick, all grooved into each other, rebated, rounded, and fixed with good cement made perfectly watertight.

Cut all necessary holes for service and waste pipes, and have all brickwork solid foundations. The risers of privies to be of 3-inch Yorkshire stone rubbed and backed with brickwork. Lay Yorkshire stone kerbs for iron railing, 9 inches × 8 inches, to enclose porter's yard with spur stones, and fix templates in boundary and lodge wall for end of railing, weathered on top, and tooled on face.

OCTAGONAL COURT-YARD.

Footpaths and Paving.—To lay Dartmoor granite squares rough picked 12 inches × 6 inches, and 9 inches deep, as footpath from lodge gates to paving in front of governor's house, 6 feet wide, laid cambering, and hanging level as shown by sections. The ground to be well rammed for paving, which is to be laid very close bedded and grouted in good mortar. Lay Dartmoor granite *kerbs* on each side, 18 inches face and 9 inches deep, rough picked, properly bedded in mortar, and jointed in cement and joggled together as directed.

Lay across, from matron's house to principal turnkey's, and also in front of the 4 gateways, Dartmoor granite squares, with kerbs, as before described, laid to a current.

Lay round octagonal court-yard against all the buildings, 4-inch Dartmoor granite paving, 4 feet 6 inches wide, with kerb stone 18 inches × 9 inches, joggled at joints and run with lead. The granite squares and kerbs to form octangular intersections, as shown by the plan.

To provide the Yorkshire stonework necessary to form *traps* in cesspools described and shown by drawings, also for covering domes and forming manholes, having proper rings let into the same. Provide 4 *sink stones* to receive upper surface water from court-yard 2 feet 6 inches square and 12 inches thick, dished out 4½ inches, with 18-inch best air-traps let in. *Gravel* all the court-yards (not intended to be paved) 6 inches thick, and form the several currents to sink stones.

ENTRANCE PORCH TO GATEWAY.

To lay Dartmoor *granite sills* to receive gates next Francis Street and next the court-yard, 15 feet long, 2 feet high, and 3 feet 6 inches wide in one stone, each pinned down by plinths of gateway piers, the beds to be level and top faces picked. The *fronts of porch* next Francis Street and next court-yard (see Drawing), are to be wholly of Heytor granite of the best description, and the stones to be of the sizes delineated in elevations; the pediment next Francis Street to be of Dartmoor granite in one stone, and having a bed of 6 feet.

The *pediment* next the court-yard to be of Devonshire granite, formed of 3 stones, which are to be perfect in all respects. The whole to be fair picked work; the front next Francis Street to be particularly well picked, as well as the mouldings under the joints. The arch-stones, circular soffit of arches, reveal beds, and joints inside and out, to be of the very best and perfect workmanship, put together with Atkinson's cement, and secured in all respects with a sufficiency of cramps, corkings, joggles, and other smith's work, well run with lead. The sides of porch are to be faced above lodge roofs with the best Dartmoor granite ashlar, in courses to range with the fronts, 9 inches on bed, with bond stones 3 in each course, the whole picked and axed fair. The eave courses to be of Heytor granite, and to have only a portion of moulding as front and plain fascia, as drawing; the beds and heights are shown by section.

Generally.—Let in all the corking-irons, sockets, quadrants, rollers, plates, and other ironwork and fastenings necessary for securing and hanging gates, fixing iron bressamer, semi-arches, portcullis, and radiating ironwork, and for sinking the centre and stop the action of gates. The top of pediment stones to be worked fair and weathered off, so that the rain-water shall be conveyed by a wide channel into the gutters, which are to be sunk out of the eave stones. Form perforations for the water to reach the rain-pipes; notch the stone for roof timbers, and cut grooves for the lead. The plinths of porch, externally and internally, to be of similar granite to the fronts, and wrought in the same manner as the other portions, but with upright quoins.

Provide and fix to the door, window, and recesses inside gateway entrance Dartmoor granite jambs and arches, with imposts and key-stones complete, of the scantlings shown by the drawings, all fair picked to match the other portions of gateway.

Have also Dartmoor granite picked steps to show, when fixed, 12-inch tread and 6-inch rise. Pave the inside of porch with 12-inch Dartmoor granite squares, all worked with level sides; so that the same may, when bedded and grouted in Dorking mortar, become firm and solid, for which purpose fill in solid over brick arches with concrete.

Form *wheel tracks* in gateway of Aberdeen granite, 12 inches deep, 2 feet 8 inches wide, sunk sufficiently to receive carriages of all descriptions, and to be in not more than 3 stones each, well and securely joggled together. The footway or kerbs on each side next lodges and office to be of Dartmoor granite, laid between wheel-tracks and plinths, 9 inches deep, rounded off next gates.

To fix two granite *spur stones* to defend each pair of gates when open, 7 feet long, out of 12 inches × 12 inches, worked diminishing and octangular, 9 inches diameter at top, with rounded heads, neatly tooled and well secured below ground. Also fix all necessary hooks and stops to receive fastenings to hold gates open, as may be directed. Cut all grooves and rebates necessary to shut in gates in an effectual manner; those in the arch-stones are to be in accordance.

Lay two Dartmoor granite *sink stones*, to convey away waste water, in gateway, 2 feet square and 6 inches thick, dished out with air-traps let into the same. Form grooves in the masonry for the reception of the brickwork.

BOUNDARY WALL.

To *cope* the whole of the boundary wall round the prisons with the best Dartmoor granite, joggled together at joints, 1 foot 6 inches on bed and 12 inches in height, circular on top and edges, as drawing. The coping to be well bedded in Roman cement, jointed and neatly pointed, when cleaned off, in Atkinson's cement; each stone to be secured with large double plugs.

The piers to be also capped with similar granite, agreeably to drawing; each pier cap to be in one stone, 2 feet 3 inches in height, the width of piers, and on bed to lay within 4½ inches of outside face of boundary wall. The whole to be sunk and weathered, as drawing, bedded, jointed, and plugged, and to be well secured to coping by plugs. All the quoin stones to coping to be of scantling size.

The wall next Francis Street and the two front cants North and South to have Heytor granite *plinth*, fair picked on face, 3 feet 6 inches high and 11 inches on bed, with bond stones 2 feet 6 inches wide, tailing to within 13½ inches of the inside face of wall every 12 feet; the whole cramped together with very strong 18-inch cramps securely let in and run with lead.

CARPENTER'S AND JOINER'S WORK.

(*Including Ironmongery.*)

Work.—The Contractor is to execute in a good, sound, and workmanlike manner all the carpenter's and joiner's work to the several houses, prisons, infirmaries, lodges, offices, and buildings shown by the plans, elevations, and sections to this specification, and to all such further explanations, working drawings, and directions as shall, from time to time, be given by the Surveyor or Clerk of the Works.

The *materials* are to be of the very best quality of their respective kinds, and all such as are deemed otherwise are to be removed by the Contractor from the premises immediately after the objections are made.

The *timber* is to be very prime and hearty. Yellow Dantzig or crown Memel fir, of good lengths and scantlings, free from sap, shakes, and all unsoundness, from whatever cause it may have arisen, and to be used in as long lengths as the nature of the work will admit.

The *deals and battens* to be all yellow and well seasoned; those for the carpenter's work to be from Astragal, Memel, Riga, or Dantzig, of a hearty quality, free from sap, shakes, veins, and other defects; and those for joiner's work to be from Christiana, or of a quality equal thereto, and the battens to be from Christiana or Astragal; the whole of a superior quality, free from sap, shakes, large or loose knots, wany edges, or other defects. White deals are only to be used in inside panels of doors and window dressings or other similar work intended to be painted.

The *oak* is to be of English growth, of the best description, well seasoned and sound, free from sap and other defects.

All the *materials* are to be sawed properly true, the timber agreeably to the scantlings hereafter named, the deals and battens according to their respective thicknesses, and the oak in scantlings, die square.

The Contractor to provide all necessary sheds for the deposit of the various materials, and for sawing and manufacturing the same;

also to fix up a *temporary office*, divided for the use of the Surveyor and Clerk of the Works, to be raised above ground, free from damp, and to be water tight, and to be kept in repair during the erection of all the works. Fit up the same with stoves, desks, stools, and cupboards, as directed.

Fix up next Francis Street a good and sufficient *hoard or enclosure* 12 feet high, and where necessary to other parts of the ground for the security of conducting the works, or preventing annoyance from the adjoining neighbourhood, until the boundary wall shall be sufficiently high to prevent the necessity of temporary enclosures. The hoard to have a sufficiency of posts and rails, and to be close boarded, with all necessary gates for the ingress and egress of carts and waggons, and for the workmen employed on the several works; a doorway to be made where directed, as a private entrance for the Commissioners and their Surveyor, with a good lock and three keys.

The *temporary gates* to entrance porch are to be of a good description and jib-door in same, and kept in repair until the Contractor is allowed to hang the new gates.

Porter.—The *entrances* to be guarded by a workman or porter during the hours of business, who is not to admit any person on the premises, except those on business; a board to which effect is to be painted, written, and affixed up on the outside.

General.—The Contractor to provide for the due execution of the carpenter's work all necessary saw-pits, needles, shores, struts, models, moulds, templates, levels, rules, rods, oak pins, wedges, cleets, furring bearers, cradling, battening, plugging, bracketing, and all kinds of machines, fall-tackle implements and tools, and materials of the best and most approved description, for executing the works, agreeably to the scantlings hereafter described, in a sound and sufficient manner, framing all the timbers with double tenons and housings, scarfings, dovetailings, corkings, and boltings, as directed, and planing such parts as may be necessary, particularly the intersecting joints of trussed timbers; in all which cases the scantlings stated are to be considered as when finished. Also provide all nails, wall-hooks, holdfasts, and other ironwork necessary to the completion of the carpenter's work.

And for the execution of the joiner's work provide such of the above enumerated articles as may be required, and all fillets, beads, cappings, tongues, cross tongues, blockings, toothings, housings, dovetails, dowells, keys, wedges, clamps, grounds, angle-staves cylinders, mouldings, and other necessary minutiæ for finishing the joiner's work hereafter described, and all such as may be necessary for the completion of the buildings in a superior manner, the whole to be wrought and well cleaned off, framed where necessary, and put together and finished in the best way with a sufficiency of best glue, white-lead, oil, pitch, canvas, brads, nails, screws, needle points, corkings, sockets, plates, centres, pumice stone, and sandpaper; all such parts as are necessary being rebated, beaded, moulded, morticed, mitred, scribed, housed, notched, grooved, splayed, sunk, weathered, chamfered, dowelled, clamped, framed, dovetailed, and all that may be necessary in the preparation of the work in fitting, hanging, or fixing the same in a complete manner in all respects whatever.

Assist smiths to fit and fix or hang all the works described in the smith's and founder's works. All the moulds for founders to be made by a competent workman, temporary troughs to be fixed where necessary to prevent injury, until gutters, pipes, and drains, are completed.

All flush doors to have double panels.

The joiner's work to be proceeded with and framed as soon as the contract is completed, but not to be wedged up until ordered by the Surveyor.

To *cover up* all projecting stonework, chimney-pieces, and other works, which may be considered necessary by the Surveyor as the buildings proceed, to prevent any injury until the several works are completed, cutting away and attending the several workmen on all occasions. Prepare and fix good and sufficient centring to arches under floors, to all semi-segment, or elliptical and other arches of every description throughout the buildings, having groined arches where necessary, with good and sufficient trussed ribs according to span of arches, boarded with 1¼-inch deal and supported by sufficient uprights, sills, and templates, allowing the same to remain after easing the wedges until a written order is obtained from the Surveyor for their removal. Horse centring of sufficient strength to be provided for masons for all stone arches.

To *frame* the several roofs, trusses, floors, and partitions, and all other carpenter's work, in a good, sound, and workman-like manner agreeably to the drawings and as directed. The trusses are to be framed cambering, and whenever required or necessary to be screwed up or wedged, and left at the conclusion of the business secure and perfect in every respect. All tie beams to be in one length. All the timbers, such as rafters, quarters, or joints, to be laid within 10 inches of each other, and at least 9 inches from any flue; and the whole to be corked down, dovetailed, well pinned and tenoned, and otherwise framed and put together in the best manner as shall be directed by the Surveyor.

The *ironmongery* required for all doors and windows, dressings, and other joiner's work, to be in every respect complete, having brass sockets and plates let into stonework to receive bolts, all rings, turnbuckles, nobs, and roses, escutcheons, rising hinges, rebated locks, sham furniture, and all other articles requisite for the completion of locks, bolts, bars, and other ironmongery. The iron plates to have 3 boss-headed wood-screws instead of hob-nails, as hereafter stated.

GOVERNOR'S HOUSE.

Wall plates round all the external and internal walls under floors of ground, one and two-pair and chapel stories of oak, 9 inches × 6 inches, dovetailed at angles, and scarfed and bolted as directed at heading joints, and where flues prevent, to have iron ties 3 inches wide, and 1 inch thick, secured by corkings to plates to form a complete chain-tie.

Also *chains of oak bond* in the above walls, 6 feet apart where directed in ground principal chamber and chapel stories, 9 inches × 2¾ inches, with iron ties as before described to flues; the chains and plates to lay ½ inch before face of external walls to receive the battening.

Provide a sufficiency of *oak wood bricks* to all the windows and doors, about 3 feet apart, to fix joiner's work also for the plinths, wainscoting, angle staves, &c.; the scantlings to be the exact height and width of the bricks, and have templates under all the lintels.

Lay *oak lintels* over all the openings of windows and doors the width of reveals, and 8½ inches thick, tailing on each end, at least 18 inches where flues will allow the same, and where stone lintels are not ordered.

Provide all necessary scaffolding pieces across window and other openings. None of the timbers, which pass through the openings, are to be cut out until so ordered in writing by the Surveyor to any of the buildings.

Enclose all the windows and doors, as soon as the roof is carcased in, with proper lights, old sashes or doors, or with boarding, to keep out the weather.

The *roof* is to be constructed with 6 pairs of trussed principals, and 2 half principals, as shown by the key plan, by the elevation of the details at larger scale, and in the following manner:—

The *trusses* A and B to have their tie beams below the other trusses, and notching the depth of 13 inches into the cornice, which will give the additional depth desirable for principal supports. The trusses next important are marked C C, which are to have their tie beams pass over those above mentioned, and bear on the top of stone cornice; these will be king trusses, and are to have ½ trusses F F framed into them.

The *truss* A 2 at back of pediment is to be a queen truss, having the tie beam framed into those of the trusses C C, and connected by angle irons. The truss D in the lower portion of roof over bow, is to have its tie beam framed into and connected by irons with the trusses C C.

The scantlings of timbers to be as under written :—

	In.		In.
The trusses A 1 and B.			
Tie beams	14	×	7
Principal rafters at bottom 9 × 7, and at top	7	×	7
Crown pieces	7	×	7
Additional rafters to truss A at bottom	8	×	6
and at top	6	×	6
Braces . . . . . . 5 × 5 and	6	×	6
Sill pieces	6	×	4
The trusses C C and ½ trusses F F.			
Tie beams	13	×	7
Principal rafters at bottom 9 × 7 and at top	7	×	7
Braces . 6 × 6 . . 5 × 5 and	4	×	4
The truss D.			
Tie beam	14	×	6
Principal rafters at bottom 9 × 6 and at top	6	×	6
Crown piece	6	×	6

The trusses to have *kings and queens* of cast iron open at the sides, the largest to have cheeks of 3 inches × 1½ inch, the next 2½ inches × 1¼ inch, and the smallest 2 inches × 1 inch, with large heads and feet, having mortices with circular abatements and perforations; the bolts to be of wrought iron, with keys and wedges, except those to the truss D, which are to have screw bolts and nuts. The irons preserving the connexion of beams to be wrought, and have wrought bolts, nuts, staples, &c.

	In.		In.
The pole plates	8	×	6
Purlins on the average	8	×	6
Ridge	12	×	3
Horizontal rafters	7	×	3
Radiating rafters (blocked up or framed into purlins as required)	5	×	3

The *ridge roll* is to be 4 inches' diameter, and the drips are to correspond. The *shoes* at feet of principals are to vary in form as shown by the drawings; the thickness of the metal is to be nowhere less than ⅜ of an inch; secure them with ¾-inch wrought-iron bolts, nuts, and washers. The shoes are to be a little wider in the clear than the width of trusses for the circulation of air.

The *ceiling floor, &c.* is to be framed agreeably to the plan, the binders bearing on the tie beams A 1 and B will notch down 1 inch only, as these beams are lower than the others, and will form the cores of entablatures. Other timbers of similar scantlings are to be introduced as cores for the radiating entablatures, and for reception of column caps; the remainder of the binders will frame into the tie beams, and take their bearings on the stone cornice. The scantlings are to be as follows:—

	In.		In.
The binders 10 feet long and under to be .	9	×	4
Those of greater length	11	×	5
The ceiling joists 7 feet long and under .	5	×	2½
Those of greater length	6	×	2½

(The whole to be fully morticed.)

Have such diagonal ties and braces as are deemed necessary, and in scantlings equal to 6 inches × 3 inches, and ends of tie beams and principal ties.

Wedge up the trusses from time to time as may be necessary.

The transverse trusses to be securely strapped to the longitudinal trusses where they connect, and the whole made complete in every respect with strong wrought-iron bolts.

Board the inside of roof between ties with inch rough boarding, and enclose round clock to form small room with quartering and boarding with door, linings, lock, hinges, &c., complete.

Clock.—Trim for pendulum and weights, batten out where necessary, to enclose the same and other works connected with the clock in the roof and chapel story, and provide easy access to clock-room by proper linings and good step-ladder to lead from galleries through ventilator.

All the *ends of timbers* to be laid on milled lead or iron where they would otherwise rest or abut on stone or brickwork.

Lantern Light.—To frame the skeleton timbers in a good, sound manner, relieving the weight from ceiling floor as much as possible by the introduction of trussed framing as directed.

	In.		In.
Diagonals as base framed to trusses . .	14	×	10
Minor do. and tailing pieces . . .	9	×	6
Kerbs and interties in two thicknesses each	9	×	6

	In.		In.
Principal posts	9	×	6
Common do. and munions to be framed in two thicknesses	4	×	3
The upper kerbs forming sills to sash lights to be of oak-wrought, framed and double sunk, weathered and throated	10½	×	6

The *upper kerbs* to form ceiling of roof and lantern light to be of *oak*, wrought and framed as shown by sections, and the whole exterior above roof to be boarded for lead with 1½-inch yellow battens, edges shot, and face worked to circle with proper rolls, ribs, cradling, ashlaring, and linings to make the whole complete for plasterers within and plumbers without.

The *vane*, which will be found by the Commissioners, is to be fixed and properly secured to strong diagonal ties on ceiling, and secured with straps and bolts, the ceiling joists to be 5 inches × 3 inches.

The *cornice* to be of oak, worked as drawing out of solid, and all plinths, fascias, and blockings to be formed to show their several projections.

Prepare and fix the quartering between lantern light and inside of roof to receive linings for louvre boards, and board the same with 1¼-inch tongued boarding inside.

The diagonals, circles, and framing, to be bolted together with ⅞ iron bolts, properly nutted, and well secured with all necessary ironwork to trusses.

The *sashes* to be of oak 2½ inches thick, ovolo, moulded, hung on brass centres to oak solid frames, 5 inches × 3 inches, with deal beads and moulded architrave both sides 12 inches' girth; the sashes to be hung with brass pulleys, lines and weights, so that they may be acted upon from the inside of chapel next external walls, and to be secured with rack fastening in a proper manner.

1¼-inch *louvre boards* to all the openings next inner part of roof, fixed in linings, so that they may be acted upon with best pulleys and lines as sashes to ventilate in part or wholly the chapel and roof as may be approved; the lines to act by extra pulleys against external walls of chapel where directed, and to be secured by rack fastenings in a proper manner.

External Part of Roof.—To *board the roof* with 1¼-inch yellow deal battens, listed and free of sap; shoot the edges, and jack top face for lead. The boarding to be worked and fitted accurately over the bow with proper bearers under heading joints, and where required, to make the boarding sound and fit for the plumbers; the lower or eaves board to be 2 inches thick next gutter, and worked fair to circular bow.

Prepare *ridge roll* out of 3-inch deal, worked circular, and fixed securely in iron stirrups, also rolls out of 2-inch deal, 1½ inch high, rounded for seams of lead, properly secured to boarding; the drips to be formed as shown by section, at least 2 inches deep, rebated for lead.

To leave air-holes in drips, 5 in number, to ventilate roof, 18 inches at base, and 6 inches clear space for ventilation, with louvre boarding to prevent wet getting in.

Chapel.—To batten the whole of the walls inside the chapel with inch battens 3 inches wide.

To form the pedestals under railing to enclose prisoners opposite pulpit with fir quartering 4 inches × 2½ inches, and oak sill, the front to be of iron, and the inside to have 1½ inch keyed dado and moulding 6 inches' girth.

To form entablature over all the screens with fir bressamers 14 inches × 9 inches, and proper cradling. The lower part of radiating divisions to have pedestal high fir quartering 4 inches × 3 inches between columns of each division with oak sunk sills, and board each side with inch deal batten boarding, ploughed and cross tongued with beaded capping and plinth; to board above pedestals with 2½-inch bead, flush, framing, 2 panels high, cut out for elliptical openings with all necessary beaded capping and linings.

To frame the beams and joists under prisoners' seats upon an hyperbolic section, the bearers to be 6 feet apart, 8 inches × 6 inches, laid on trusses as drawing, the joists to be 7 inches × 4 inches, bridging joists 4 inches × 3 inches, sleepers 6 inches × 4 inches; the trusses to be 8 inches × 5 inches in two thicknesses, with iron abutments, queens and kings, the braces to be 6 inches × 5 inches; bearers 6 inches × 6 inches, crown-pieces 9 inches × 6 inches. Board all the floor and steps with 1½-inch deal, free of sap, rounded on edge, and 1¼-inch risers. The seats to be of oak 1½ inch thick, 12 inches wide, rounded edge, and supported by iron bracket bearers 6 feet apart, screwed to bearers and seats. Flaps to be formed to centre division hung with 2½-inch wrought proper hinges. Fix 2½-inch framing at back of seats next way to convicts' prisons with narrow panels bead flush on both sides, 2 panels high, beaded capping and ¾-inch plinths. The doorway next bridge from convicts' prisons to be of 2½-inch deal, framed in 4 panels, bead, flush outside, and flush within; plated on the inside with iron ⅛ inch thick, and well secured with hobnails diagonally driven 4 inches apart. Oak, wrought, framed, rebated, and beaded doorcases 6 inches × 4 inches, well secured into wall with strong cleets; fix up 1½-inch linings on the inside, rounded on edge.

Line all the walls of chapel 4 feet 6 inches high with 1¼-inch deal frieze, panelled bead flush wall wainscoting; fit on beaded capping, and have torus plinth. To have oak wrought, rebated, and beaded frames, 6 inches × 4½ inches, to all the windows with weathered and double sunk sills 6 inches × 4 inches, fixed very securely with strong oak cleets let into walls. Assist Smiths to fix the iron sashes and ventilators having proper stay bars secured to frames. Fix 1½-inch angle staves to inside quoins of reveals for Plasterers, and have 1½-inch rounded window board on proper bearers.

Provide and fix a *cistern* under the Prisoners' seats to contain 200 feet cube water, with 2-inch deal, dovetailed rim and bottom, and proper oak skeleton timbers as directed, secured with 2½-inch rod bolts, with screwed ends, nuts, and washers complete. Have door in frame to get at cistern with lock and hinges.

ROBING ROOM, STAIRCASES, &c.

To enclose under galleries for lobby-entrances top of staircases, also for gallery fronts and returns, with fir quartering plates, 6 inches × 6 inches, joists 6 inches × 4 inches, quarters 6 inches × 2½ inches, braces 6 inches × 3 inches, oak sills 6 inches × 4 inches; also proper door heads, puncheons, &c.

Floor.—To lay oak ground joists and sleepers 4 feet × 4 feet, board the same with 1¼-inch yellow deal, and *skirt* with inch plain skirting to robing-room.

Doors of 2-inch deal, 4-panels bead flush to all the entrances; 1½-inch deal, rebated linings, inch-framed grounds and O G bead round; hang the doors with 3-inch wrought butts, and fix on 7-inch 3-bolt mortice locks, and two 9-inch barrel bolts to each; fix a cupboard, as directed, with 1½-inch 4-panel door, hung with 2½-inch butts, have proper linings and grounds, and fix on good 5-inch dead lock; have three shelves and rail and peg inside, as directed.

The *pulpit*, *reading-desk*, and fittings, are to be agreeable to drawings, and finished with prime picked wainscot, the framing of 1½-inch deal moulded, with base, surbase, capping, and book-boards complete; the doors to be hung with brass pulpit-hinges, and have latches. The *floor* to have oak-framed joists and deal boarding. The *staircases* to be of oak, with moulded nosings returned; the lower winders to pulpit to be so constructed that they can be removed at pleasure, on brass castors under quarter winders, when passage way is required. Wainscot-turned balusters and moulded and wreathed handrails. *Skirt* with moulded skirting on grounds against wainscoting throughout chapel.

Pews.—Fit up the governor's and other pews with 2-inch deal framing bead flush, and splayed book-boards, beaded capping, 1½-inch deal floor and joists; 1¼-inch oak rounded seats, and cut bearers; hang the doors with proper hinges, and fix on brass pulpit latches.

Fix up three 1½-inch oak seats, as shown on plans, for the turnkey, or where directed, on iron brackets, with rounded ends and edges.

The *staircases* leading to galleries to be of 1¼-inch yellow deal, with proper framed carriages, 1¼-inch cut strings and moulded nosings, oak rounded handrail, and deal for balusters, having iron newels and balusters where necessary to stiffen the same.

Frame the *gallery floor* with trimmers 9 inches × 6 inches, and joists 9 inches × 3 inches, tailed into walls, and well pinned. Board the floors and form steps to back seats with 1¼-inch deal, and proper bearers. Frame the enclosure to gallery front with 2-inch deal bead flush framing, moulded base and surbase, 9 inches' girth outside, and inch capping at top, with book-boards complete.

Line the walls back of gallery and up the staircases with 1¼-inch wainscoting, 3 feet 6 inches high, beaded capping and torus plinth.

The variation between plan and section in respect to situation of pulpit (the former showing pulpit against back wall, and the latter showing it to stand more forward on a pedestal), is to be considered optional with the Commissioners as to which mode they may prefer.

The side doors leading into chapel from male and female staircases and to robing-room, to be covered with baize and brass nailed.

The *enclosures* to staircases to be 9 feet high, with framed joists 6 inches × 3 inches, boarded at top with inch boarding, ploughed and tongued; moulded cornice 9 inches' girth round lobby, with 2-inch blocking above. Board the lobby partitions, both sides, with inch deal wrought, ploughed, tongued, and beaded.

CHAMBER STORY.

Batten all the external walls with 1¼-inch battens, 3 inches wide, secured with iron plugs or wall hooks.

Floors.—Lay in all the rooms oak sleepers 6 inches × 4 inches, over iron beams, on spandrils bedded in cement, and cork down fir joists thereon, which are to run through in one length 6 inches × 2½ inches, pinned into walls each end, and trimmed to chimneys and slabs.

1¼-inch yellow deal straight-joint floor, free of sap, nailed on edge, and tongued heading joints, bordered round slabs.

Fix inch plain *grounds*, 2¼ inches wide, dovetailed at angles, and inch torus skirting board-wide, with proper fillet backings, and housed to architraves.

The *windows* to have deal-cased frames, oak double-sunk and weathered sills, 1¼-inch pulley pieces and grounds, deal beads and parting slips each tongued in 2-inch deal ovolo sashes double hung with brass-faced and axle pulleys, best braided lines and iron weights complete. Fix on each a brass quadrant best spring sash fastening. Fit up the windows with 1¼-inch proper grounds on boxings, and 1½-inch shutters in 2 panels hung in 2 heights, OG flat and bead butt, hung with 2½-inch wrought butts and 3-hole strap hinges. Fix on 30-inch strong japanned spring bar fastening, and put 4 brass knobs to each window of shutters. Fix inch deal 2-panel bead butt linings, tongued at angles, 1½-inch soffits, backs and elbows moulded and splayed with cappings and plinth, and fix round an architrave moulding 4½ inches' girth.

Doorways.—Hang to all the doorways 2-inch deal 4-panel doors, framed, bead flush on both sides, 7 feet high and 3 feet wide, hung with 4-inch wrought butts, and 7-inch best warded mortice locks, with 3 bolts and brass-knob furniture; the lining to be framed in 5 panels, bead flush, double rebated, with dovetailed backings; 1¼-inch framed and ploughed grounds 4¼ inches wide, and quirk OG bead moulding 4 inches' girth round each side.

Fix up a *cupboard* in each room, where directed, the whole height, and 5 feet wide, projecting 14 inches from wall, with 1½-inch framing rebated and beaded at angles, having door framed in 6 panels folded in 2 heights. The doors to be hung with 3-inch butts, and have good 4-inch dead locks, and 6-inch brass-knob necked bolts to each. Fit up the cupboards with 1¼-inch dresser shelf, 3-inch deal shelves board wide, and 1 row of rail and pegs to each.

Enclosures.—To enclose across passage next chapel stairs with 3-inch framing, and 2½-inch folding-doors in 6 panels, with circular heads up to arch; 1½-inch framed linings double rebated, with grounds and architraves as to the other doors. Hang the doors with 3 pairs of 4½-inch wrought butts to throw them back against staircase, and fix on one 12-inch and one 36-inch wide brass flush bolts with plates and sockets.

Angle staves to all quoins 1½ inch, rebated and beaded for plasterers.

Cap the iron *handrail* to staircases from chamber to chapel with 2½-inch moulded oak handrail grooved for iron, with screws to heading joints, and proper ramps, knees, and caps complete.

Partitions.—The bow-rooms to be divided with 5-inch trussed quarter partition plates 5 inches × 4 inches. Principal posts 5 inches × 6 inches, cut out 5 inches × 4 inches. Braces joggled, 5 inches × 3½ inches; common quarters, 5 inches × 2½, with oak sills 5 inches × 3½ inches. Secure partition to ceiling and walls with iron ties, and have necessary ironwork to truss.

Water-closet.—To fit up the water-closet with cedar seat, flap, and plinth 1¼-inch thick, on proper dovetailed bearers; the seat to be screwed down with brass screws, and plinth beaded on edge. The flap to be morticed, clamped, rounded on edge, and hung with 2½-inch brass butts.

A *cistern* to be fixed where directed, to contain 30 feet cube of water, of 1½-inch deal dovetailed at angles, on oak bearers; enclose the front with quartering, and have 1½-inch framed doors to get at cistern, as directed. Case the pipes with 1¼-inch deal, rebated and beaded sides, and inch front screwed up as panels with brass screws. Cut all holes for seat, handle, pipes, &c., and attend the Plumbers.

ONE-PAIR PASSAGES AND STAIRCASE, DOWN TO PRINCIPAL STORY.

To fix up narrow *grounds* and fillets, *skirt* with 1¼-inch deal board-wide, and base moulding 4½ inches' girth to hall and passages of principal story.

Wainscoting.—To fix up 1½-inch deal bead flush wainscoting with frieze panels 4 feet 6 inches high, capped with moulded capping, torus plinth, 2-inch deal pilasters up to springing of arches, with moulded caps, bases, and plinths.

All the *windows* in passages of ground and one pair, also those in water-closets, are to be finished in a manner described to the rooms on each story.

Water-closet doors to be as described to each story.

The *entrance door* on principal story to have 2½-inch deal moulded folding-doors in 4 panels, double margin, agreeably to drawing, with flush inside panels, lined with ⅛-inch iron plating, and studded diagonally with good hobnails; also stud outside rails and stiles with 2½-inch octangular headed nails. Oak wrought, framed, rebated and beaded door-case, 9 inches × 6 inches, secured by toothings into wall, and let solid into stone step with moulded transom, and all necessary inside lining, cornice, and plinth. The *fanlight* to be of wrought iron, well secured in solid oak frame, and finished to correspond with door architraves; hang the doors with 6-inch wrought iron stout butts of Collinge's patent. Fix on 12-inch best brass-warded and mounted detector lock (made by Chubb, or equal thereto), with 3 proper master keys case hardened, which are to pass all other prison locks, and by an extra movement to prevent turnkeys and keys in suite from acting, if desired; two 12-inch strong brass-knob bright barrel-bolts, with brass sockets and plates to each door; a locking bar fastening to door-case in iron lockers, with hook to suspend the same, and 2 mask knockers, as approved, secured with bolts and nuts.

The *iron handrails* to staircase to be capped with prime wainscot, moulded and grooved, and having all necessary wreaths, ramps, and twists complete. Screw all the joints with screws and nuts, and paper up and clean off the handrails when directed.

Batten where necessary, and cradle all the arches, and have 1½-inch beaded angle staves for Plasterers.

All the circular work to be glued up in thicknesses, or worked out of solid in the best manner.

The *circular-headed window sashes* to be agreeably to elevations; the shutters to go up to springing of arch only in chambers, but to top of arch in ground story for better security, with level soffits, boxings and architraves, and spandrils fitted into sash frames.

ROOMS IN PRINCIPAL STORY.

To *batten* out all the external walls with 1½-inch deal battening 3 inches wide, and where required to shutter boxings with quartering 5 inches × 2½ inches.

Floors.—Lay in all the rooms oak sleepers 6 inches × 4 inches, and joists 6 inches × 3 inches, in one length, as directed to chamber story; and have 1¼-inch yellow batten straight joint floor (free of sap or defects) nailed one edge, and tongued with iron tongues at heading joints.

Fix up inch ploughed *grounds* for Plasterers 3 inches wide, and fix 1¼-inch plinth 13½ inches wide, with base moulding 4½ inches' girth, agreeably to drawings, housed at ends and mitred and dovetailed at angles.

All the *windows* to have proper cased frames, as before described, with 2½-inch oak astragal or bevel-beaded bar-sashes, hung with the best-faced brass axle pulleys, strong braided patent lines and lead weights; fix very strong brass quadrant sash-fastenings to each window, and tongue and screw with brass screws the sash beads. The boxings, shutters, soffits, backs, and elbows and dressings to these windows to be similar to those described to chamber-windows, except the shutters, which are to be in 4 panels, plated at the back with $\frac{1}{8}$-in. iron plating nailed, as directed, and secured with strong iron locking bar fastening let into iron lockers, which are to be firmly fixed in brickwork, and 30-inch best spring bar fastenings to secure upper shutters, with brass latches and knob complete. The boxings to be sufficiently large to allow shutter bars to be suspended. The architrave mouldings round windows to be 6-inch face, projecting $2\frac{1}{2}$ inches, with plinths to receive base moulding, and moulded agreeably to drawing.

The dining-room *windows* to have *Venetian sash-frames* and sashes, with solid munions and extra pulleys for weights to run down in reveals. The centre sash to be double hung, and the sides fixed. The shutters to have extra flaps, strong hinges, and double cross locking bar to effectually secure the same.

All the *doorways* to have $2\frac{1}{2}$-inch deal doors, framed, bead, flush, in 6 panels, with double margins, 7 feet 6 inches high and 3 feet 4 inches wide, hung with Collinge's patent 6-inch iron butts, and 7-inch best 3-bolt mortice locks, with good lacquered furniture.

Prepare doors for mortice locks with double-framed lock rails. The linings to be of 2-inch deal framed in 8 panels, bead, flush, double rebated; $1\frac{1}{4}$-inch framed grounds grooved for Plasterers and moulded architraves and plinths to correspond with windows.

The *door* to magistrates' room to be folded with one 12-inch and one 36-inch brass flush bolts and rebated mortice locks.

All cupboards and office fittings to be a separate estimate.

Water-closet.—To be fitted up with 2 inch deal moulded, lobby framing, and door, as shown on plan, hung with 4-inch butts, brass 5-inch pulpit latch with private bolt. The seat, flap, and dressings, the cistern and pipe casing to be in all respects as described to the chamber water-closet. Line the walls round water-closet and lobby, 4 feet 6 inches high, with proper plinth and capping.

GROUND STORY.

To have $1\frac{1}{4}$-inch deal, bead, flush, dwarf, *wainscoting*, 4 feet high, with beaded capping, and plain plinth, to all the rooms and passages. To have proper *sash frames* and *sashes* with shutters and dressings, hinges and fastenings as described to the chamber story, the backs of shutters to be plated with $\frac{1}{8}$-inch iron plating, and nailed as described.

The kitchen to have *Venetian window*, and all the sashes to be hung double with proper sash fastenings, locking bars, and iron platings complete.

Hang to all the internal doorways 2-inch deal, 4 panel, bead flush doors, 7 feet high and 3 feet 3 inches wide, hung with 4½-inch butts, and 8-inch strong brass warded and mounted 3-bolt iron-rim locks, 1½-inch deal, double-rebated and beaded linings, framed in 5 panels bead flush, with strong dovetailed cleets behind, and 1¼-inch framed and planed grounds, with quirk OG bead mouldings round all the doors.

The *door* to turnkey's room to be of 2½-inch deal 7 feet 6 inches high and 3 feet 6 inches wide, flush, framed one side and strongly iron plated, hung with 1 pair of 6-inch Collinge's best hinges, to throw back against the wall, and 12-inch iron-rim lock with patent wards and tumblers (made by Chubb, or equal thereto), with case-hardened keys in suite; iron guard bar 2½ inches wide ⅝ inch thick, hung on centre with staples and spring complete.

The *external door* to lobby next the front entrance to be of 3-inch deal, 7 feet 6 inches high and 3 feet 6 inches wide, with 1½-inch iron ovolo bar sash in do., as drawing, rebated in and screwed; plate the inside of the door, and have hinges, lock, and bar, as described to the door of turnkey's room; hang side light of iron to correspond with sash in door, and 2½-inch flush enclosure below, plated with iron. The doors to be hung, and the side light fixed to an oak wrought frame 6 inches × 3 inches, rebated and beaded, well secured by iron bolts and extra toothings let into stonework. Fit up on the inside proper boxings with rule joint shutters and flaps to extend over the face of side lights, and sash-door hung with 3-inch butts, strong rule joints and strap hinges. Fix knobs and strong locking shutter bar, also two 12-inch barrel bolts, brass mounted; fit up inside dressings with soffit, elbows, backs, lining, boxing, and mouldings, as described.

The *doorway* from turnkey's room to sunk area to be of 2½-inch deal, framed in 6 panels, with double margins, bead flush outside, 9 feet high and 3 feet 6 inches wide, hung with 6-inch Collinge's hinges, a 12-inch best brass warded and best tumbler lock, as before described (p. 107), made by Chubb, or equal thereto; and strong iron fastening hung on centre, 12-inch wrought neck bolts, and 2 iron dogs let in to doorcase; fix on a knocker with nuts and screws to the value of 5s.

The *doorcase* to be of oak 9 inches × 5 inches, wrought, framed, rebated, and beaded, secured to the wall by iron spikes and extra toothing; plate the inside of door with ⅛-inch plating, secured by hobnails, as directed. The inside to have 1½-inch linings, staff, beaded, on edge, and tongued to doorcase. Fix over the doorway an iron fan sash as drawing, with 2-inch strong bar, well secured to oak frame, and the inside by iron bars let into brickwork.

The inner *cellar-door* to be 2-inch proper ledged door with oak doorcase 6 inches × 4 inches, hung with 24-inch strong cross-garnet hinges, and good 9-inch stock lock.

The *privy* to be fitted up under water-closets for turnkeys with 1¼-inch oak seat, riser, and flap; a cistern to contain 27 feet cube water, and all necessary pipe casing: the lower part of shutters to be secured up. Fit up a cupboard and rail and pegs in turnkey's room, as directed, to the value of 5*l.*

The *governor's kitchen* to be fitted up with a *dresser* 8 feet long and 2 feet 6 inches wide, consisting of 3 drawers, pot-board under, and 3 shelves, standard and fascia over, with all necessary oak-framed and turned legs, deal-framed rails, and rebated runners; the top to be of 2½-inch deal, glued and blocked, the drawers tongued and dovetailed with glued sliders, good locks, and strong chest handles to each; 2-inch deal shelf over chimney-pieces with brackets, and have 2-inch deal cut *spit racks.*

A *cupboard* 6 feet wide to be framed and fixed with 2-inch framed, front rebated, and beaded 1½-inch square, framed folding doors, hung with 3-inch butts, good dead lock, 5-inch neck bolt, 3 shelves to inside, one 18 inches wide, two 9 inches wide—with rails and brass hooks under the same.

An *ironing board* to be fixed up where directed, 7 feet long and 3 feet wide, of 1½-inch deal, clamped with iron legs and plates, hung to hanging stile with 3-inch table hinges.

A *servants' privy,* as shown on plan, with 1¼-inch oak seat, riser, and clamped flap, hung with 2½-inch butts.

The *pantry* to have fly wire to window, and to be fitted up with 12 feet of dresser, 2 feet 3 inches wide, on proper legs and rails, and 60 feet of 1¼-inch shelves, with brackets board wide.

The *scullery, cellars, privy,* and other doorways in sunk story to have 1½-inch proper ledged doors, hung with hooks and hinges, and proper oak doorcases 4 inches × 4 inches.

Doors at top and bottom of male and female staircases leading to chapel, also from passage for females to octangular court-yard to get to chapel without going into the governor's house, with hinges, locks, iron plating, and fastenings, as described to the turnkey's room-doors.

MATRON'S AND PRINCIPAL TURNKEY'S HOUSES.

Wall plates round all the walls under floors of ground and principal stories, of oak 7 inches × 5 inches, dovetailed at angles, secured where flues intersect by iron chain tie; also lay a chain of oak bond, one in each story, 5 inches × 2¾ inches, the chain and wall plates to lie ½ inch before face of walls to receive battening.

Provide a sufficiency of *oak-wood bricks* to all the windows and doors, about 3 feet apart, to fix joiner's work, also for plinths, wainscoting, angle staves; and where required, the scantlings to be the same as the bricks in height and width, and have templates under all the lintels.

Lay *oak lintels* over all the openings of windows and doors the width of reveals, and 5¾ inches thick, tailing on at each end at least 13½ inches.

Enclose all the windows and doors as soon as the roofs are covered in with *paper lights*, old sashes, or doors to keep out the weather.

Roofs.—Frame the trusses, ceiling floor, and roofs, also the floors, in a good sound manner with timber of the following scantlings:—

	In.		In.
Fir framed and corked tie beams see from A to B	12	×	5
Fir principal rafters housed in to iron queens at bottom	8	×	5
Fir principal rafters housed in to iron queens at top	6	×	5
Fir upper principal rafters housed in to iron kings at bottom	8	×	4
Fir upper principal rafters housed in to iron kings at top	6	×	4
Wrought-iron skeleton queens as drawing	7	×	5
Iron caps and shoes as drawing.			
Oak crown pieces and straining beams	8	×	5
Oak braces	5	×	5
Pole plates	7	×	5
Fir purlins notched on trusses	7	×	5
Fir rafters	5	×	3
Fir ridge pieces	9	×	3
Ceiling Floor.			
Fir binders	10	×	4½
Fir ceiling joists	5	×	2½
Fir braces to ceiling joists where necessary	6	×	3
Oak diagonal ties to angles	6	×	6
Oak dragon pieces	6	×	4½

N.B.—All these scantlings had better been on the drawings instead of encumbering the specification.—T. L. D.

Boarding.—To make level and true every part of the roof, and board the same with 1¼-inch yellow battens, listed, free from sap, and shot on edges; the top face to be jacked for lead, the eaves, board-ridge rolls, for joints, drips, &c., to be in every respect as described to the governor's house.

Air-holes to drips, 3 in number to each roof for ventilations, as described to governor's house.

PRINCIPAL STORY.

Batten all the external walls with inch battening, 3 inches wide, secured with wall hooks, together with quarter battening.

Floors.—Lay in all the rooms oak sleepers, 6 inches × 4 inches, over iron beams, and on spandrils corked down on fir joists 6 inches × 2½ inches, pinned into walls each end, and trimmed to slabs.

Have 1¼-inch yellow batten straight joint floor listed, free from sap, nailed on edge, and tongued at heading joints and borders round the slabs. Fix inch ploughed and tongued grounds, 3 inches wide, dovetailed at angles, and 1¼-inch torus skirting, with fillet backings. Have to the windows deal circular sash-frames, oak double-sunk and weathered sills, and 2½-inch deal quirk bead sashes, double hung with best brass axle-pulleys, strong braided lines and lead weights; fix on each a brass quadrant best sprey-sash fastening. Hang 1½-inch deal 4-panel shutters, framed, bead flush, in 2 heights, with 3-inch best butts, and strong strap hinges. Fix on good strong iron locking bars, let into iron lockers, fixed solid in reveals, and brass-knob latches, 1¼-inch proper boxing-grounds, and moulding 6 inches' girth round as architrave.

Hang to all the *doorways* 2-inch deal, 4-panel, bead flush doors, 7 feet 3 inches high and 3 feet 2 inches wide, with 5-inch patent Collinge's hinges, and 7-inch 3-bolt mortice locks, and plain furniture.

The *linings* to be of 1½-inch deal, framed in 5 panels, bead flush, double-rebated, and beaded with dovetailed backings, 1¼-inch framed and planed grounds, 4¼ inches wide, and moulding 5 inches' girth round each side.

Have 2-inch framed *front to the closets* in recesses in rooms and staircases of both stories, 1½-inch 4-panel doors, bead flush and square, hung with 3-inch butts; put up 3 shelves inside each, and put 6-inch dead locks.

Cap the top rails to staircase railing with 2½-inch rounded and grooved oak handrails, with ramps, knees, and solid caps; secure the joints with brass nuts and plates.

ENTRANCE, PASSAGES, AND STAIRS.

To have 1½-inch bead, flush wall *wainscoting*, 4 feet 6 inches high, with moulded plinth and capping.

The *entrance doors*, with fanlight and dressings, hinges and fastenings, in all respects to be as described to the Governor's house. The *lock* to be as described to the turnkey's entrance door.

GROUND STORY.

Wainscoting.—To have 1½-inch deal dwarf bead, flush wainscot, 4 feet 6 inches high, with beaded capping and plinth to entrance passage and all the rooms.

Windows.—To have proper sash-frames, with 2½-inch deal ovolo sashes, double-hung with best brass axle-pulleys, best strong braid lines and iron weights; 1½-inch deal inside shutters, 4 panels, bead flush, plated inside with ½-inch plating, nailed as directed, hung with 3-inch butts and strap-hinges, and secured with iron locking bars. The soffits, backs, elbows, boxings, and grounds, to be as described to upper story, with 1½-inch quirk OG moulding round.

The *internal doors* to be of 2-inch deal bead flush, 7 feet high and 3 feet wide (except door to turnkey's room, which is to be 7 feet 6 inches high and 3 feet 6 inches wide), hung with 4½-inch butts, and 8-inch strong, copper-warded and mounted, three-bolt, iron-rim locks; 1½-inch deal double-rebated and beaded linings, framed in 5 panels, bead flush, with strong dove-tailed cleets behind, and 1¼-inch framed and ploughed grounds and quirk OG bead round. The hinges, lock and iron bar to turnkey's room next the passage, to be as described to Governor's house.

The external sash-door to front entrance, with side lights and inside shutters, dressings, lock, hinges, and fastenings, to be in every respect as described to the entrance of the Governor's house, ground story.

The *doorways* from the turnkey's rooms to sunk areas, with doorcases, iron fans, bars, hinges, locks, and fastenings, to be also the same as to the Governor's house in every respect.

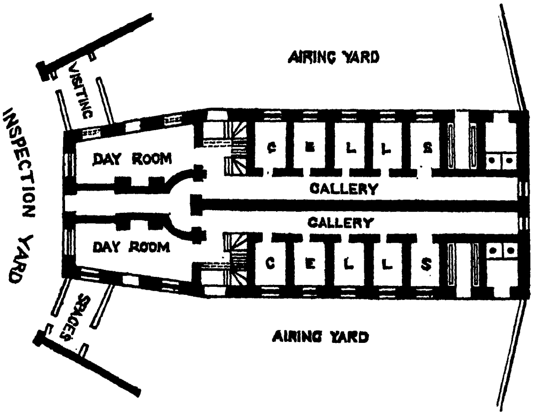
The *kitchens* to have *dressers* 5 feet long and 2 feet 3 inches wide, each consisting of 3 drawers, pot-board under, and 3 shelves, standard and fascia over, with all necessary oak-framed and turned legs, deal-framed and beaded rails and rebated runners. The *tops* to be of 2-inch deal, glued and blocked; the *drawers* to be dovetailed, with good *locks* and chest-handles complete. 2 inch deal shelves over chimney-pieces, with brackets, and have 2 cut spit-racks where directed.

Cupboards 4 feet 6 inches wide, 1½-inch deal framing, and doors hung with 2½-inch butts, and 4-inch dead-locks. Fit up the inside with 3 shelves, one 14 inches wide, the others 9 inches wide, with rails and brass hooks under the same.

The *privies* bottom of stairs, also the privies inside area, leading from sunk area, to be fitted with 1½-inch enclosure and 6-panel bead flush doors, the upper part fixed in with glass, hung with 3-inch butts and 4-inch best pulpit latches, with private bolts, 1¼-inch oak seats and risers, with flaps and skirting complete, 1½-inch dovetailed cisterns, to hold 30 feet cube water, with all necessary pipe-casings screwed up and holes cut as may be directed.

The *pantries* to be fitted up with 15 feet of 1½-inch dresser, 2 feet wide, on proper bearers, and 30 feet of inch shelves and brackets, 1¼-inch proper ledged doors to all the cellars, sculleries, pantries, and other doorways, with oak proper doorcases, well secured, hung with 24-inch cross-garnet hinges and 9-inch stock-locks.

DOUBLE RADIATING PRISONS.



Roofs.—To frame in a good, sound, and workman-like manner the several roofs, agreeably to the plans and sections, with timbers of the following scantlings:—

	In.		In.
Fir tie beams	12	×	6
Fir principal rafters, at bottom 9 × 6, at top	7	×	6
Fir hip rafters	12	×	3
Fir longitudinal rafters, below drip (notched on principals 1½ inch)	8	×	3
Fir longitudinal rafters above drip (notched on principals ½ inch, with laps and bolts) .	7	×	3
Fir ridge pieces	9	×	3
Fir struts under principals	6	×	6

The *skeleton iron kings* to be as drawings with 1½-inch bolt to hang up the bearer with nuts, washer, and king caps.

Board the roof with 1¼-inch yellow batten-boarding, free from sap, shot on edges, and jacked on top for lead, the eaves board to be 2 inches thick, the boarding to be worked and fitted accurately, and make the roof sound and perfect for plumber.

Prepare and fix *hip and ridge rolls* out of 2½-inch deal, worked circular, and fixed securely in iron stirrups, also rolls out of 2-inch deal, worked circular on top for seams of lead, properly secured and spiked on boarding. The drips to be formed as shown in section.

The *rafters* to be so framed on these roofs, that they may be under the rolls for lead to receive spikes.

Air-holes to drips 5 in number to each prison to ventilate roof, 18 inches at base, and 6 inches' clear space for ventilation, with louvre boarding to prevent wet getting in.

Doors next passages to all the prison cells, infirmaries, and day-rooms, also across the passages next the magistrates' entrance, also the doors from magistrates' entrance to inspection yards to staircases of 1½-inch deal, framed in 4 panels, flush, and the outside of 1½-inch battens, laid on diagonally, feather-tongued at joints, and nailed, both faces with large hobnails, 4 inches apart, as Drawing No. 49; the doors to lie back against wall with 30-inch strong hook-and-eye hinges, neatly worked, and chamfered on edges, secured by corkings let sufficiently into stonework hinges to be fixed with 5 octangular-headed screw bolts and nuts each; the pivots and cups of boxes properly steeled; the pin to be let into socket 2 inches. Fix on 9 inch strong brass-warded *locks* with tumblers of *Chubb's* patent detector, or equal thereto, with case-hardened keys in suit (at least 3 in each division), and strong staple, as shall be approved, to the value of 35s. each door. *Iron bar* outside 2½ inches wide, ½ inch thick, chamfered edges, fixed on centre bolt made to pattern, with strong dog-plate springs and staples. Fix in all these doors *inspection plates* made on the principle of gratings of gun metal, the movement to be made for action on the outside only, securely fixed in iron rebated frame having proper knobs.

The *shutters* to all the cells, infirmaries, and rooms, are to be framed of 1½-inch deal, bead, flush, hung with strong iron hooks corked into wall, and hinges having rub joints to flaps, which are to turn back against wall. (*See* Drawings No. 50 and 51.)

Line the inside, also the edges with plate-iron, nailed as directed with hobnails 4 inches apart.

DAY-ROOMS.

1½-inch *oak seats* 11 inches wide, wrought and rounded on edge, secured down to oak bearers, which are to be supported by iron legs and bearers, 6 feet apart let into walls.

WATER-CLOSETS.

1½-inch *oak seats* wrought, ploughed, and tongued, plated with iron, except under flap, with holes, cut and rounded as directed; to be rebated on stopper or syphons, and secured to stone risers by oak wrought bearers, 6 inches × 3 inches, wedged into walls. Hang 1¼-inch chamfered flap 2 feet wide over the hole, hung with strong hinges.

Assist smiths and plumbers to fix the iron standards of screens to prevent exposure without excluding inspection.

Case the pipes, and screw up the same, so that they may be examined when necessary.

SUNK STORY.

Hang *doors* where directed to passage, near warm-air stoves, 2-inch deal, 4 panels, bead butt, hung with 24-inch strong hooks and hinges, let in with corkings to stonework, and fix strong 18-inch plate-bolt; also let into stone, fix on good strong padlock, with hasp and staple complete.

1¼-inch *boarding*, ploughed, tongued, and beaded, with proper capping secured to iron gates leading from sunk areas to all the stoves; also to iron gates of dwarf walls leading to inspection yards of the 3 prisons, as described to double radiating-prisons.

TURRET OVER STAIRS TO BRIDGE.

To have fir framed *joists* 6 inches × 3 inches to form flat and *board* with 1¼-inch deal for lead, having all necessary wall plates, inch boarding to soffits ploughed and tongued (the bell frame and fixing to be a separate charge). To hang *door* and have doorcase with hinges and fastenings complete at top of stairs next bridge, with hinges and lock in every respect as described to door leading from bridge to chapel.

SINGLE RADIATING PRISONS AND INFIRMARIES.

ROOFS.

To frame in a good sound and workman-like manner the several roofs, agreeably to the plans and sections, with timber of the following scantlings :—

	In.		In.
Fir tie beams	12	×	4
Fir principal rafters at bottom, 8 × 4 at top	6	×	4
Fir hip rafters	9	×	2½
Fir skew rafters	12	×	3
Fir longitudinal rafters	7	×	3
Fir ridge piece	9	×	3
Fir struts under principals	4	×	4

The *trusses* to be as drawing, with king caps and feet, and 1½-inch bolt to hang up the beam, with nuts and washer.

The other particulars to be provided as already described in the preceding roofs.

The doors in the passages leading to chapel for men and women to be as before described.

The *water-closets* to be fitted up with seats, pipe-casing, and other work as before described, with one cistern in upper closet to contain 60 feet cube of water to serve all the closets in each prison.

To have 2-inch *boarding* framed, bead, flush both sides, secured to iron gates across the 2 cartways by straps, with capping and plinths, to prevent exposure of prisoners passing to and from the chapel.

The *doctor's rooms* and *nurse's rooms*, in the 3 infirmaries, to be fitted up with 1½-inch *cupboard*, front and ends, and folding-doors in each, 5 feet wide, with dresser, shelf, and 2 shelves 9 inches wide above, with 3 drawers under dresser. Hang the *doors* with 3-inch butts, and put on 6-inch dead locks, and 2 neck bolts. Fix up *dresser* in doctor's rooms 5 feet long and 2 feet 6 inches wide, on framed legs, and rails, and fix up where directed 24 feet of shelves, board wide, on brackets.

Sunk Story.—Hang where directed to passage near warm-air stoves, in sunk story, 2-inch deal, 4-panel, bead, butt doors, lined with ⅛-inch iron plating, hung with 24-inch strong hooks and hinges, let in with corkings to stonework, and fix strong 18-inch plate bolt; also let into stone, fix on good strong padlock, with hasp and staple complete.

To have 1¼-inch *boarding*, ploughed, tongued, and beaded, with proper capping secured to iron gates leading from sunk areas to all the stoves, also to iron-gates of dwarf walls leading to inspection yards of the 3 prisons, as described to double radiating prisons.

TRIANGULAR BUILDINGS TO FORM OCTAGON IN COURT-YARD.

Frame the *roofs and flats* agreeably to drawings, in a sound and proper manner, with timber of the following scantlings (leave air-holes, 2 in number, to each roof for ventilation as described to prisons).

Fir *principal beams* 13 inches square, cut down the middle, reversed and bolted together. Transverse do. 13 inches × 6½ inches. Fir principal rafters 9 inches × 6 inches at bottom, 7 inches × 6 inches at top; straining pieces 7 inches × 6 inches.

The *queens* to be of cast-iron, open at the sides with wrought iron bolts, keys, and wedges; oak pole plates 9 inches × 6 inches; fir pitching piece, secured on principal, 10 inches × 6 inches; common rafters, 5 inches × 2½ inches; hip rafters, 10 inches × 3 inches; purlins, 7 inches × 5 inches; joists to flat, 9 inches × 3 inches, with proper firrings for lead; trimmers next wall of single prison, 9 inches × 4½ inches; oak diagonal ties and dragon pieces to all angles, 6 inches × 6 inches; oak wall plates all round, dovetailed at angles, 7 inches × 5 inches. Frame all the ironwork to trusses, foot of rafters and tie beams, with strong bolts and staples, or wedges as directed. The walls of single prisons to have oak templates to receive ends of timbers at proper distances from floors.

The *ceiling floor* to have all necessary binders 10 inches × 4½ inches, as drawing, but no ceiling joist to be filled in. Board the roofs with 1¼-inch yellow batten, having lean boards and rolls as described to other buildings.

Cistern or reservoir to be fixed over each of the triangular buildings where directed, a cistern or reservoir to contain 120 cube feet of water to bottom, to be of 2-inch deal, and the rim of 1½-inch deal, with oak wrought quarterings, 6 inches × 4 inches on 3 sides, supported by oak bearers, 9 inches × 6 inches, to lay on tie beams, with all necessary angle pieces for plumbers, with iron tie bolts, and rods put together with white-lead, 1½ inch covering with ledged flap hung.

Finishings.—Deal-cased *frames*, oak, double-sunk sills, and 2½-inch oak ovolo sashes. The *sashes* to be hung with brass butts and strong turn-buckles, 1¼-inch window-board tongued to the inside on oak beams. The *cistern*, and all fittings-up in the kitchen, scullery, washhouses, laundry, and store-rooms, to be a separate estimate hereafter.

The *doors* to be of 2½-inch deal, plated with ⅛ of an inch iron, well nailed on the inside, to all the doorways, hung with 6-inch wrought butts, and 10-inch good copper-warded knob locks, with strong staples. Oak wrought, framed, rebated, and beaded door-cases, 7 inches × 5 inches, secured with iron spikes let into stone sills; 2½-inch fan-sash over the doors to correspond with the windows above; 1¼-inch lining to doors, tongued and rounded.

ENTRANCE GATEWAY, WITH LODGE, OFFICE, AND OTHER BUILDINGS ON EACH SIDE.

(*See Drawing, No.* 65.)

Roofs.—Board the roofs with 1¼-inch yellow battens, having clean boards and rolls for lead, as described to other buildings.

The several *roofs* to be framed in a good, sound, and workman-like manner, agreeably to the plans and sections, with timbers of the following scantlings:—

	In.		In.
Fir tie beams	10	×	4
„ principal rafters at bottom . . .	7	×	4
„ „ at top . . .	6	×	4
„ oak wall plates, dovetailed at angles .	7	×	5
„ hip rafters	9	×	2
„ longitudinal rafters	7	×	3
„ ridge piece	9	×	3
„ struts under principals . . .	4	×	4

Lintels over openings the width of reveals, 6 inches thick, and 14 inches' bearing at each end. Provide a sufficiency of oak bricks to fix joiner's work.

The *skeleton rings* to be as shown in drawing, with caps and bolts.

Leave *air-holes*, two in number, each side of gateway for ventilation, as described in prisons.

Windows.—To have deal casement, sash-frames, oak sunk sills and weathered, and 2-inch deal ovolo sashes to the windows of lodge, office, and end windows of both rooms, hung double with brass axle pulleys, best white lines and iron weights, best brass quadrant, sash fastenings, iron guards; same also to kitchen.

Fix 1¼-inch deal *staff bead* inside linings and beads. The inside of windows, the semi-window lights to be of 2½-inch deal ovolo *sashes,* agreeably to drawings; lower sash hung with proper cased frames and oak sills and inside window boards complete.

The *external doors* next gateway to be of 2½-inch deal framed, bead, flush, lower part with diminished stiles; 1¼-inch iron sashes to upper part, and 1¼-inch bead, flush shutters, plated with ⅛-inch iron and securely nailed; the shutters to be hung with 2½-inch brass butts, and to fall down against door with brass thumb-screws, stubs and plates, and 2-inch brass flush bolts. The doors to be hung with 6-inch best butt-hinges, good 12-inch strong copper-warded drawback locks. Two 12-inch extra strong wide plate bolts made to pattern.

Fix *oak proper doorcases* for these doors, 6 inches × 4½ inches, framed, rebated, beaded, and tenanted, with stone steps secured with toothings and cleets; 1¼-inch deal inside linings and staff-beaded edges, and tongued to frames.

The internal *doors* and privy *door* to be of 2-inch deal, 4 panels, bead flush, hung with 4½-inch butts and good 8-inch iron-rim, 3-bolt copper-warded locks, with two 9-inch strong plate, extra good bolts and plates, 1½-inch deal double rebated and beaded linings, with strong dovetailed cleets, 1¼ inch framed and grooved grounds and single moulding round both sides.

The *examination and admission rooms* to be fitted up with 1¼-inch oak seats, 11 inches wide, rounded on edge with iron brackets and secured into walls.

The *admission room* to be fitted up hereafter.

The *bath-rooms* to have flaps and frames over baths of 1½-inch deal clamped, hung with 1½ pair of 3-inch butts; the frame to be well plugged to walls and plinth board wide above the same; secure flap when open by strong settle bed hooks.

The *privies* to have 2-inch oak seats and risers with strong bearers, with small clamped flap over hole hung with 2½-inch butts.

Cistern over each privy to contain 18 feet cube of water, of 1½-inch deal wrought and dovetailed with strong oak bearers and munions wrought and framed.

Enclose the cisterns with door and frame for plumbers to get at the same, and fix all necessary casings, braces, and fillets to complete the same.

The *fan* over privies next yard to be of iron, in solid frame, well secured.

The *flat* framed with fir 9 inches × 4 inches; joists 9 inches × 2½ inches, boarded with 1¼-inch boarding for lead and firrings.

The *dead-houses* to have lanthorn lights, with solid frames, 4 inches × 4 inches, and solid oak sills 6 inches × 4 inches, sunk and weathered with 2-inch ovolo sashes hung on centres to ventilate, with proper pulleys, lines, weights, and fastenings complete.

The top of lanthorn lights to have fir kerbs 5 inches × 4 inches, joists 6 inches × 2½ inches, cambered and boarded for lead; have all necessary linings to inside as directed.

ENTRANCE GATES NEXT FRANCIS STREET.

Gates.—Frame with choice picked 4-inch well-seasoned English oak, free of sap or any defects, the outside folding-gates agreeably to drawings, and as shall be hereafter directed, put together with iron tongues, dowels and white lead. The inside of gates to be plated with $\frac{3}{16}$-inch iron plating, also all the edges. The face of gates to be well studded with wrought-iron nuts, rivetted and headed with hexangular caps 2 inches square, properly secured and accurately driven, as shown by elevation.

The 8 moulded panels to be of cast-iron, rivetted in stiles and rails in rebates, and the face ground to make the same, with mouldings, equal in appearance to joiner's work, and fit for painting.

The *gates* to be *hung* with patent *hinges* manufactured by *Collinge*, of Westminster Road; the hooks with strong corkings are to be let into solid stone, the strap of hinges to go across the whole width of gates, and to be 4½ inches wide and 1 inch thick, neatly moulded on face with octangular-headed bolts, which on the outside are to appear as the margin bolts.

The *head of gates* behind portcullis to be framed, fixed and plated to accord with the folding gates, suspended on an iron transom 4 inches wide and 2½ inches thick, with ¾-inch rebated on the under side for stop to gate.

The *finishings* to be of the most complete description of rack bolts, with powerful lever handles made by a competent smith, and to be made to act on the most easy, perfect manner, as hereafter directed; the weight to be 2½ lbs., including bars, socket, collars, and all ironwork connected with the gates, except hinges and plating, manufactured in the best and most workmanlike manner, and fixed complete, with lock to secure the rack-bolts of a good description, value 4 guineas, including 3 best keys. Have two mask knockers agreeably to drawing, with perforations to answer as grating, value 30*s.* each.

A *jib door* to be framed in the gates 6 feet 5 inches high and 3 feet 5 inches wide, to accord with the general character of gates, to be hung with 6 *Collinge's hinges* properly capped, and 12-inch best *lock*, with brass wards and tumblers, having 3 case-hardened keys (made by *Chubb*, or equal thereto); strong *bar*, hung on centre pier and secured with strong plates, staples and springs complete. Independent of the rack-bolt to folding gates, each lock to have *master keys* for governor.

Assist Smiths and Carpenters to fix the whole of the ironwork to these and inner gates next court-yard, also the portcullis above the gates, in the most secure and complete manner, without the aid of quadrant and rollers if possible; but should the gates not act with the greatest ease, the Contractor will be required to put the quadrant plates, and apply rollers mounted with brass and having copper sockets, to make the gates move in the most free and perfect manner.

To have *iron stop* in centre for folding gates to be acted upon by the opening of gates, and let down below sill when the same are open.

The whole of the Carpenter's work to be left perfect.

Fencing.—Provide and fix 10 rods of cleft oak fencing, 7 feet high, to enclose Francis Street where boundary wall cants off to the south angle next cow-yard to enclose the ground at the north end next Francis Place.

Provide two *flood-gates* to keep back water from King's College ditch from the prison, to the value of 10*l.* each.

If the *joints of floors*, or any other joiner's work, should open $\frac{1}{16}$th of an inch within twelve months of the same being executed, the whole is to be redone in a proper manner, and all work injured by so doing made good.

SMITH AND FOUNDER.

Material.—The iron to be of the best and most approved quality from Shropshire or Wales, for the several purposes required of a pure nature. The *wrought-iron* bars to be of the best grey soft iron, properly manufactured, well hammered, framed, and worked, the whole properly filed and cleaned off before being fixed in the several works hereafter described.

The *cast iron* to be smelted in pigs, to be cast of the pattern required, by founders of capability, in proper moulds, which are to be made by experienced workmen; a sample of each casting, where there are more than one, to be sent to the premises for approval, and the casting of all others delayed until a written order is obtained for proceeding with the remainder.

The several works intended to be cast are to be turned out very true, without any flaws or defects, and the arrisses to be perfect. Any inferior or faulty casting will be returned.

All the *iron girders* and other works deemed necessary are to be weighted and their soundness proved in the presence of the Clerk of the Works previous to their being delivered; and unless capable of supporting double the weight required, they are not to be brought on the premises. All works not stated to be of cast iron, to be considered of wrought iron.

When the drawings do not show the necessary level for cast-iron work to admit of mould being removed from castings, it is to be considered the size drawn is the thickness of the wedge or lesser edge.

The whole of the ironworks are to be of the weight and substance required, and hereafter represented by the drawings, and manufactured in the best and most workman-like manner, and to be very carefully fixed in their several places. Such parts as are not particularly mentioned are to be made sufficiently strong for the purposes for which they are intended, providing all necessary nails, spikes, screws, nuts, washers, wedges, stirrups, plates, cleets, straps, ties, bolts, butments, staples, stubs, stays, stay-bars, collars, corkings, cramps, plugs, keys, pins, and all other work necessary to secure and make perfect the whole of the Smith's and Founder's work for the necessary completion of the Carpenter's, Mason's, and other trades; and in hanging the several doors and gates with their respective and necessary fastenings, using in all cases a sufficient quantity of pure lead to run the several holes, mortices, corkings, plugs, cramps, flanches, boxes, centres, quadrants, and collars, and for securely fixing the whole in a sound and effectual manner to the satisfaction of the Surveyor.

The frames of all gates to be strengthened by *heels* neatly welded on top, middle, and bottom rails, and the meeting bars to be strongly rebated, welded, and moulded on face.

All *hinges* to doors and gates are to be made on the best and most approved principle, and of sufficient strength, neatly wrought and chamfered on edges, to be knuckled where necessary, and made to throw doors back as directed. The strap hinges to have bossed-headed screws or nails to show on both edges, and to appear in accordance with the nailing on face of doors.

The *iron and other doors* hung on centres to have large cast-iron boxes let into solid stone 2½ inches, with solid caps to receive the round heads of centres, which are to be of copper or iron steeled, 1-inch diameter, and 2 inches long; and the thimbles of upper hinges are also to be steeled with neat wrought conical caps to prevent the possibility of gates being raised. All corkings and sockets, thimbles, and boxes to be of wrought iron, 3 inches wide and 1½ inch thick, let into solid stonework, and well joggled, when not let in solid, to soffit or heads of stonework.

The *large gates* to be strongly rivetted together and to have very strong centres top and bottom, attached by double corkings through the piers, also to have straps clipt round, hanging bars moulded and rivetted.

The *external locks* to have iron guards or cases properly secured to bars.

The *rain-water pipes* are to be of cast iron ⅜ths of an inch thick, with moulded cistern heads as Drawing No. 22, and very securely fixed, having shoes to convey water from building into drains.

The whole of the ironwork when brought on the premises to be put under cover until required to be used or painted.

All the *keys* described to the iron doors as well as those described in the joiner's work to the wood doors, are to be delivered up properly labelled at the conclusion of the business in a perfect state.

To *provide* all necessary cramps for the Mason (to secure the stonework) which are to be extra strong; and if not in every instance described, the same are to be in proportion to those particularized according to the nature of the work. All the bars to railing, window-guards, and gates, are to be at an equal distance, and the holes in rails accurately made. The spikes, spears, darts, barbs, and finials to all the external work to be well forged and sharply pointed, having a sufficiency of stay bars, standards, stays, and cleets, as may be directed. The *chevaux de frise* to prison-yards to be brass mounted and the fangs to revolve on the axis separately as well as on the eye of standard; the spikes to be steeled and made agreeably in all respects to the model exhibited, having only 6 points, 12 inches long, as drawing.

It is to be understood that the weights hereinafter described for iron chain bars and bond are to include such tie bars across flues as may be necessary to connect the iron bond.

GOVERNOR'S HOUSE AND CHAPEL.

Wrought-iron Chimney-bars to be provided and fixed to all the openings, 2½ inches wide and ⅞ths of an inch thick, to lay through the jambs, properly cambered and secured to corkings at each end. The kitchen chimney-bar to be framed as cradle-bar, formed of 1¼-inch iron 2¼ inches wide. The chimney-bars to weigh altogether 12lbs.

Chain bond to be fixed round the external and internal walls in the several stories in 4 tiers, including that on cornice, and making a total weight of 13 tons, of such form as directed, and as shown on drawings, secured to iron girders let into stone and run with lead. The tie to chapel floor to be connected with and secured to the columns as well as girders, and where the flues interfere, the chains are to be worked agreeably to Plan No. 15. The upper tie is to be let in 1½ inch to stone cornices, and to be made to secure the iron shoes into which the principal trussed beams are to be laid.

Cast-iron drips made agreeably to drawing for bottoms of gutters round the buildings let into stone grooves on each side, and perforated as directed, and fixed complete. (*See* Drawing No. 22.)

The *columns* in chapel to relieve weight of roof and support screens to be cast with pedestals, caps, and bases, agreeably to Drawing No. 19. The caps to have iron plates secured to brest-summer, with sockets and joggled tenons to receive them, also bases in independent castings.

The *trusses to roof* to have skeleton kings and queens of cast iron, with stout caps and shoes, and strong bolts screwed or wedged up to suspend beams, as Drawing No. 17.

The feet of principals to have iron butments and screw bolts with washers and nuts, and the ends of trussed beams to be fitted into strong iron shoes made as drawing, bolted through tie beam and principals, and fixed on the upper chain tie, which secures the stone cornice.

Dog-ties to be provided and fixed to binders of ceiling-floor, to all scarfings of timbers, to secure the skeleton kerb of lanthorn-light, and generally provide all such Smith's work as may be named in the Carpenter's and Joiner's specification, and particularly connect all the ties at their intersection with irons.

The *lanthorn light* is to have a vane which is to be found by the Commissioners, but to be fixed and well secured by the Contractor with iron ties to roof and ceiling-floor.

To provide and fix the several *cast-iron beams* necessary for supporting the brick arches to the several floors cast with proper flanches, as shown by drawing, and to be of sufficient strength. *See* No. 18.)

To cast and fix strong *iron pipes*, 6 inches diameter in clear on face, and 5½ inches in clear from front to back, properly fitted together at joints with all necessary bands and flanches properly secured and fixed to walls with strong spikes, so that the air may pass at back and sides of same; the *shoes* to be conveyed to reach the drains. Cast and fix good stout *cistern-heads* agreeably to drawings, with the Westminster arms thereon. (*See* No. 22.)

The water from inspection-yard channels is to be conveyed to drains by six 3½-inch *cast-iron pipes* with heads and shoes.

CHAPEL.

Provide all the necessary ironwork to the *trusses* under the prisoners' seats, and secure all the timbers with proper *iron kings*, queens and abutments; also strap-ties, stirrups, and such other ironwork necessary. (*See* Drawing No. 21.)

To work and fix the *wrought-iron railing* and *gates* to enclose the prisoners, agreeably to Drawing No. 12. The principal uprights, bars and rails to be of the size figured on drawings, with all collars, straps, and corkings complete for front screens. (*See* No. 19.)

The *gates* to be hung in the manner directed, and good locks or latches, value 20*s.* each, fixed thereon. Also fix to the radiating screens between columns *iron railing* with oval cappings, as Drawing No. 12. The *iron sashes* to chapel windows to be framed as Drawing No. 19, 1½-inch thick, with extra strong frames prepared for ventilation, rebated with hopper ventilators made water-tight, enclosed on top, fixed on centres, and acted upon by proper brass pulleys, lines, and racks where directed.

Cast-iron front, with mouldings 16-inch girth, and plinths and cappings complete as drawing to the pedestal front, which encloses the prisoners, well secured to the columns and framing; also attached to the beam, no part less than ⅝ths of an inch thick. (*See* No. 12.)

All necessary ironwork to support pulpit staircases, gallery, and other parts of joiner's work, value 5*l.* Fix in the ceiling cast-iron *ventilators* as drawing, to be acted upon by lines and brass pulleys concealed in recesses of brickwork.

N.B.—*Brass gratings* and retorts to warm chapel from stoves below and from robing-room stove, not to be included in estimate.

The *gates* on landings top of men's and women's staircases leading to visitors' seats in front of prisoners, to be of wrought-iron, corresponding with those in the screen, and to be hung and secured by similar locks in a proper manner.

The *staircases* leading from single prisons, infirmaries, and to chapel for men and women prisoners, to have *wrought-iron railing* to steps 3 feet high, and on landings, quarter spaces and windows 3 feet 6 inches high; each step to have 2 bars, 1 inch square, rivetted to strong moulded top-rail, with ramps and knees. Strong *newels* and *stay-bars* where necessary to make the whole complete. Also have at the foot of each staircase wrought-iron doors and railing above the soffit of steps to prevent access to stairs, properly hung on centres, and secured with locks value 20*s.* each. The railing to cross the windows where the window-backs are less than 3 feet high above the upper steps. To have iron sashes to the windows of the above staircases, and to all the blank windows to correspond externally with the windows of governor's house, having good corking irons to secure the same to stone bonders, which are to be provided for that purpose by masons.

Wrought-iron gates to doorways in the passages on each side of governor's house from single prisons, male and female staircases to have doorways hung on centres, with *locks* value 20*s.* each. Each passage will have three gates.

GOVERNOR'S STAIRCASES.

The *staircases* and *landings* from hall of principal story up to chapel to have *wrought-iron railing* 2 feet 10 inches mean height, 2 bars, $\frac{3}{4}$-inch square, let into each step, and bars, equally distant, on landings rivetted to the top rail, worked round well-hole in a correct manner to receive oak capping, with all necessary stay-bars and strong moulded newels to lower steps. The rails to be double underhand rail. The railing on landings to be 2 feet 2 inches high.

GROUND STORY.

Cast-iron door to the principal turnkey's room next passage as drawing, hung on centres, with latch and lock value 20*s.* (*See* No. 14.) The staircases down to kitchen and cellars, also each side of steps to turnkey's room, to have plain railing 3 feet 6 inches high, with two bars on each step, and equal distance on landings, with strong moulded top-rails finished off to form the hand-rails.

Enclose the entrance leading to turnkey's room and prison under landings of front steps with wrought *iron railing and gate,* framed as drawing with bars $1\frac{1}{4}$ inch diameter, and strong cross-rails; the gate in centre to be framed and hung on centres with brass *tumbler-latch* and case-hardened key, value 20*s.* (*See* No. .)

The external steps and landings on both sides leading up to entrance of principal story to have wrought-iron railing with round bars $1\frac{1}{4}$-inch diameter, with double top and bottom rails, and strong moulded top-rail with ramps and knees agreeably to drawing, and very handsome moulded standards and *newels* equal to 2½ inches diameter, with strong stay-bars as directed.

Two handsome *box scrapers*, value 21*s.* each, to be fixed to entrance door principal story, also two large mask-knockers and two strong plain scrapers to each of the lower doors, value 7*s.* each.

Wrought-iron *guard-bars* on the outside of all windows ground-story with 1¼-inch round bars and two cross rails 3½ inches wide ⅝ths of an inch thick, securely let into stonework.

SUNK AREA AND WAY TO CONVICT PRISON-STOVES.

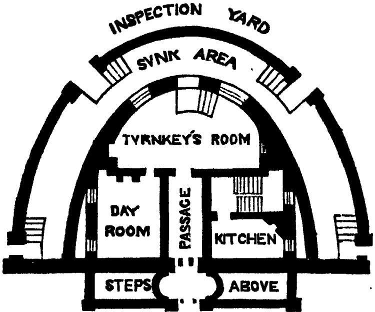
Iron gratings or guard-bars to all external *windows* sunk story. Iron gratings to apparatus and air-holes let into stonework. Plain wrought-iron framed *gates* at bottom of steps to entrance passage leading to stoves as drawing, with strong rod, bars and standards properly secured with well-corked top-rails. (*See* No. .) Have good copper-warded *locks* to all the gates, value 10*s.* each. The side areas divided off from sunk area next kitchen and area with *urinal*, to have *wrought-iron railing* over the same properly secured to coping, and let into walls; the bars to be 2½ inches deep, ⅜ inch thick, and 3 inches apart, with double-framed cross-rails well secured with corkings.

Doorway leading from area to urinals to have *iron gates* to hang on centres with staple straps corked in, and boxes with latch of the value of 20*s.* To fix in turnkeys' water-closet hoppers under seat 12 inches' diameter agreeably to drawing, and have iron troughs or syphons to receive soil from the same properly trapped. (*See* No. 39.) Have 4 *air-traps* 9 inches diameter made upon the best principle in a good manner, to be let into stone sinks dished out to receive the same as directed in Mason, exclusive of what is already described. To have iron grating in opening of passage under inspection yards next sunk area, the bars to be 1¼ inch diameter. The *iron railing* from steps to sunk area up to the inspection yards and down to passages leading to warm-air stoves, to be of wrought iron 3 feet 6 inches high, the bars to be ⅞ inch thick, and let into stone, and rivetted to neat-moulded top rail with circular corner, ramps and stout standards. Secure the top rail to stone templates in wall, and have all necessary stay-bars and scrapers, and to foot of all steps next sunk area.

Hang gates on centre top of steps leading to inspection yard the height of dwarf walls, made with wrought iron, very stout, with good latches value 20*s.* each. Have a gate and railing next each space for hot-air stoves of cast-iron, so as to cut off the communication with the other portions of sunk story, value 4*l.* 10*s.* each.

MATRON'S AND PRINCIPAL TURNKEY'S HOUSES.

Gutters.—To have cast-iron drips, made agreeably to drawing, for bottoms of gutters round the buildings, let into stone grooves on each side, cast and perforated, and fixed complete. (*See* No. 43.)



MATRON'S OR TVRNKEYS HOVSE

To provide and fix wrought-iron *chimney bars* to all the openings, the weight in each house to be 3 lbs., to lay through the jambs, properly cambered and secured by corkings at each end.

A *chain of iron bond* to the cornice round the two buildings under gutters, each weighing 1 ton 5 cwt., let in 1½ inch to the stone, run with lead, and made to secure the iron shoes into which the principal beams are to be laid, as to Governor's house.

The *trusses to roof* are to have a sufficiency of ironwork in queen's butments, shoes, and bolts, as described to the Governor's house-roof, in proportion to the scantling and bearing of timbers described in the carpenter's work as defined by the Surveyor.

Provide and fix the *iron beams* shown on plans to support brick arches, as Drawing No. 15. To fix *cast-iron pipes* and cistern-heads, as before described to Governor's house, to convey water from gutter to drains; but the diameter of these pipes to be only 4½ inches. Fix up *wrought-iron railing* to staircases leading down to kitchens and cellars, also from turnkey's rooms to sunk areas with ⅞-inch wrought bars and moulded top rail, with iron newels and stays where necessary. The *external steps* and landings leading up to entrance doors of principal story to have strong wrought-iron railing with double rails, and moulded top rail ramped and kneed with newels and standards, caps and stay-bars complete, as described to the entrance of Governor's house.

Cast-iron doors next passages from turnkey's rooms as drawing hung on centres, with latches or locks to the value of 20s. Fix 2 good box scrapers to each entrance door principal story, and 2 strong plain scrapers to each of the lower doors, fixed where directed, and large mask knockers.

Enclose the lobby entrances leading to turnkeys' rooms under landings of front steps, with wrought-iron railing, and gates framed as drawing, with bars 1¼ inch diameter, and strong cross railing; the *gate* in centre to be hung on centres with brass tumbler latches, and case-hardened keys, value 20s.

Wrought-iron *guard bars* on the outside of all windows to ground story, with 1¼-inch rod bars, and 2 cross rails 3½ inches wide, ½ inch thick, securely let into stonework.

SUNK AREAS AND WAY TO SIDE PRISONS.

Iron gratings to apertures and air holes let into stonework. Wrought-iron, plain framed gates to entrances of passages leading to stoves, as described to sunk area of Governor's house. The water from inspection yards is to be conveyed to drains by 3½-inch cast-iron rain-pipes, with heads and shoes, 4 to each house. Have to each of these buildings 3 air-traps, 9 inches diameter, made upon the best principle in a good manner, let into stone-sinks, dished out to receive the same as described in Mason, exclusive of the several sinks and urinals already described.

The side areas divided off from sunk areas next kitchen and privies to have wrought-iron railing over the same, properly secured to copings, and let into walls; the bars to be 2½ inches deep, ⅝ inch thick, and 3 inches apart, with double-framed cross rails.

The *steps* from sunk areas up to inspection yards, and the steps down to passages leading to warm-air stoves to have wrought-iron *railing*, the bars ⅞-inch thick, let into stone, and riveted to neat moulded top rail with circular corners, ramps, and knees, and stout standards and newels where required.

Secure the top rails to stone templates on wall, and have all necessary stay bars to make the ironwork firm and complete in every respect. To have iron gratings in openings of passage under inspection yard, the bars to be 1¼ inch diameter.

The gates at top of steps leading to inspection yard to be the height of dwarf wall, to correspond with those of convicts' prison, and to be hung complete in every respect with latch, value 20s. To have to the doorway leading from sunk areas of principal turnkey's room to urinal iron gates, to hang on centres with latch complete, to the value of 20s. The doorway from area of matron's house for other purposes to be similar. Have plain scraper to each doorway, and to foot of all steps next sunk area.

WINDOWS TO THE CELLS, PASSAGES, AND STAIRCASES OF THE NINE DOUBLE PRISONS, WITH THE EXCEPTION OF WOMEN'S DAY-ROOMS, ALSO OF THE PASSAGES AND STAIRCASES OF THE SIX SINGLE PRISONS.

Cast-iron *louvre windows* let into stone dressings in a firm and secure manner, with corkings and toothings, or shoulders agreeably to drawing No. 50, and to the model already prepared. The louvres to be fixed so that they may be taken out with a secret brass-headed screw movement from the outside if required; the boss head to have a tool or winch to fit the same, and prevent its being drawn by any other means. The louvres to be cast agreeably to model as respects design, but to the drawing as respects the gauge of iron —viz., full ½ inch thick on the inside edge, and ⅜ inch thick on the outside edge. The louvres to the day-rooms and lower story are to be rather more weighty than those to the upper stories, which are to be cast rather lighter as an equivalent. Let iron socket into stone jambs for screws. The windows at ends of passages to have the lower parts filled in with louvres as before described, and the upper parts with wrought bars 1¼ inch diameter, and 2 cross rails 3½ inches wide.

MEN'S DAY-ROOM WINDOWS.

Cast-iron *louvres* as above described to the side windows next airing grounds, and wrought-iron *guard bars* to the inspection windows next the Governor's, principal turnkey's, and matron's dwellings; the bars to be oval on face, 1 inch × 1½ inch deep, with 2 cross rails 3½-inches wide, round bars, and 2½ inches to spaces, the whole securely let into stonework.

WOMEN'S DAY-ROOM WINDOWS—ALSO WINDOWS TO INFIRMARIES, STATE PRISONERS' CELLS, ETC.

Guard bars in front of sashes 1⅛ inch diameter, and rails in proportion. *Cast-iron sashes* 1½ inch thick, with plain chamfered bar in iron frame, well secured in rebate with corkings to stonework; the sashes to be made capable of ventilation from upper part, as Drawing No. 51, with strong hinges at bottom, and iron radiating rack frame.

DOORS TO INNER REBATE OF JAMBS, TO THE SOLITARY CELLS FOR REFRACTORY PRISONERS, MALE AND FEMALE.

Skeleton doors of cast iron agreeably to Drawing No. 49, hung on pivots or centres, with strong pivots let into boxes at bottom, and thimble corkings at top let into stone, 6-inch best brass warded tumbler locks or latches (to be made by Chubb or other approved locksmith), with good case-hardened keys *en suite* to each door, value 20s. each. The latches to be well secured on gates with iron casing, and to have strong iron staples securely let into stone jambs.

OUTSIDE GATES TO MAGISTRATES' DOORS, ENTRANCE TO PRISONS, THE GATES FROM DAY-ROOMS, STAIRCASES, AND WASHING-ROOMS TO YARDS, AND THE INNER DOORS ACROSS THE SEVERAL PASSAGES.

Hang *cast-iron doors* agreeably to Drawing No. 56, on centres as before described, with 8-inch brass-warded tumbler detector locks of the value of 1*l.* 15*s.*, having three keys *en suite* to each door.

STAIRCASE FROM CONVICTS' PRISON AND BRIDGE LEADING TO CHAPEL.

Iron railing, newels, and stay-bars to the stairs as described to other staircases. Hang open cast-iron gate at bottom of stairs as to cell doors, with lock, to the value of 1*l.*

The *bridge* to have cast-iron sides, bearers, and bolts of the dimensions shown on drawing, with all necessary flanches, abutments, corkings, and bolts complete; the whole to be fixed in a good and secure manner to the entire satisfaction of the Surveyor. Wrought-iron railing on each side of bridge agreeably to Drawing No. 20; the rails to be 3 inches and 1¼ inch thick, securely fixed into stonework. The bars to go deeply into granite landings of bridge, and to be firmly and properly fixed in every respect.

Two *cast-iron bricks* 9 inches × 3 inches, 18 inches long and 1¼ inch in substance, worked through the wall, of all the prisons and infirmaries, between passages and cells, over all the doors, and bedded in cement as shall be directed. The *smoke flues* from warm-air stoves are to have cast-iron frames and rebates with proper fastenings fixed where directed. The *flues* to all the day-rooms to have iron rod bars across to prevent escape of prisoners.

Water-closets.—Cast-iron hoppers, ½ inch thick, with proper flanches and bolts to each seat made as Drawing No. 67, also iron traps, and receptacle, and soil-pipe, which is to be constructed as drawing, and to be ½ inch in substance fixed solid on brickwork, cast-iron standards 1½ inch diameter, fixed in centre of doorway with cross-rail on top to work on centre top and bottom, with pivots and sockets, properly steeled, and have strong cast-iron plating fixed after the manner of a screen or turnstile with wrought straps to each 2 feet 6 inches × 1 foot 6 inches, to prevent exposure without dispensing with the necessary inspection, having proper frames and screens necessary to complete the same. The standard to act upon a lever and valve, so as to discharge water at every movement into the hopper to cleanse the same. Provide and fix an air-trap to each *urinal* 9 inches diameter. The *turnstiles* to be of the value of 3*l.* 3*s.* each.

AIRING GROUNDS.

To have *wrought-iron railing* to enclose the sides of airing grounds next the inspection yards, and also between the airing grounds, and the space reserved at the back of prisons next boundary walls, with one gate in each yard, and proper stay-bars as shown in Drawing No. 56. The *gates* to be hung in the best manner, and the locks to be of a proper description to the value of 1*l.* each. Fix over the iron railing iron *chevaux-de-frises* of the size shown by Drawing No. 56, and agreeably in execution to the model with the omission of 2 spikes, the whole to be fixed on an axle and secured in every respect. Have in each of the airing grounds 3 *air-traps* 9 inches diameter, made upon the best principle in a good manner, to be let into stone sink, dished out to receive the same as described in Mason, exclusive of the several sinks and urinals already described.

INSPECTION YARD.

To have *wrought-iron railing*, agreeably to Drawing No. 56, to *enclose space* for visitors at a distance from the prisoners, having gate and lock in each division as described to entrance of airing ground, and proper stay-bars; also have a large spike fixed or riveted to rail at each bar, as Drawing No. 56.

Have in each yard 2 *air-traps* 9 inches diameter, similar to those described to airing grounds.

Pipes from flat over ways to Chapel.—Cast-iron *water pipes* 4 inches diameter, ⅜ inch in substance, as Drawing No.   , with moulded *cistern heads*, properly fixed, where shown on plan, and secured with flanches, bands, and spikes, and to be kept ¼ inch from walls to prevent wet getting in. *Shoes to pipes* to go down the funnels and to convey water into drains.

TRIANGULAR BUILDINGS ROUND OCTAGONAL COURT-YARD.

Roofs.—To provide good and sufficient iron queen bolts, butments, iron screw bolts, and other requisite ironwork necessary for the trusses as directed.

Cast and fix iron *drips* in gutters similar to what has been described to prisons. Fix iron *guard bars* to windows of 1¼-inch rod iron, and rails 3 inches wide, and 1 inch thick.

The water to be conveyed away by 2 stacks of 4½-inch *rain-pipes* to each building, or if 1 stack only should be considered necessary, to be 6 inches diameter, with proper cistern heads.

Fix *iron ties* through walls of single prisons to secure timbers of roof and ceiling floor of these buildings.

Two *air-traps* 9 inches diameter to each building similar to those described to inspection yards.

ROADWAY FROM OCTAGONAL COURT-YARD TO THE REAR OF PRISONS.

Six pairs of *folding gates*, as shown by the plans, framed agreeably to Drawing No. 60, and of the scantlings stated thereon, hung, having all necessary standards, stay-bars, rebates, corkings, and collars, and secured in the best manner with good gate-locks as approved of, of the value of 40*s*. each.

The *gates* to have rack-bolts, rods, sockets, and other necessary appendages, and staples and hooks to keep the gates open as required; the whole to be worked in the most approved way, agreeably to patterns, out of good metal of the weight of 80 lbs. each.

A *chevaux-de-frise*, similar to what is described to the airing-grounds, to be fixed on standards over the two pairs of gates at the rear of prison's south-west and north-west angles.

The foot-path for males and females to attend chapel across the roadway to have four pairs of *wrought-iron gates*, agreeably to Drawing No. 60, hung on centres with stay-bars and appendages, as above described to roadway gates, and *locks* value 20*s*. each; the rack bolts to be made to pattern as above, of the weight of 36lbs. each. Have to each roadway three *air-traps* 9 inches diameter, similar to those described to roadway.

LODGES AND OFFICES EACH SIDE OF GATEWAY ENTRANCE.

The admission rooms to be fitted up with iron upright bars and top rails, part hung on centres for the security of the prisoners, to the value of 10*l*. each.

Iron railing to be fixed on each side of doorways leading to admission rooms, also to office rooms; the slope of court-yard making it necessary to have 6 steps up to lodge building, except only to porter's lodge and rooms next gateway, which is to be only three steps up. The bars to be inch square, 3 feet 2 inches high, and moulded newels equal to 1½ inch diameter, with rounded top rails 2½ inches wide as approved. Fix strong wrought *scraper* let into stonework at each doorway front and rear. To prepare and fix *railing* to divide off porter's yards from gateways leading to rear of prisons, as Drawing No. 56, 12 feet 6 inches in height, with standards and stay-bars of the thickness as described thereon, and have iron *chevaux-de-frise* over the same of pattern before described, but spikes to be only 9 inches in length, well secured with standards.

N.B.—Ironwork and coppers in bath-room not to be included in estimate.

The *guard bars* to office windows next lodge and to fanlight over doorways and water-closets to be as before described.

Each lodge-building to have 5 *air-traps* 9 inches diameter, similar to those described to court-yard. Provide wrought-iron chimney bars, the whole weighing 1½ cwt.

PORCH IN GATEWAY ENTRANCE.

Iron king's straps and screw bolts to the trusses of roof, as shown by Drawing No. 65. Fix *iron tie* on stonework foot of roof; also to secure the pediment stone front and back, 4 inches wide, well secured at angles in manner hereafter described, let in and well run with lead; the whole weighing 1 ton 11½ cwt. Provide 3 cwt. of wrought-iron in *corkings* and extra large *cramps* to fix securely the stonework to gateway entrances, and well run the same with lead. To convey away water from roof of porch by connected pipes and good cistern heads into gutters of lodge and office buildings.

To cast and fix *iron brestsummer* at springing of entrance gates, also to inner gates next court-yard, of ½-inch iron in the thickest parts, strengthened with back-stays inside and flanches at end, well let into stonework, the face to be cast with sinkings and rebates formed as sections.

The *inner gates* next court-yard to be framed and hung, folding on the best principle, in a superior manner, agreeably to and of the dimensions marked on the Drawing No. 65, with strong outside frames, bars, rails and spikes, with strong heels to angles of frames and strong rebate for centre folds, all of wrought iron. The gates to be hung on strong centres with boxes complete, all steeled in the best manner and secured to stonework by very strong corkings through the piers, bolted and well run with lead; additional collar-corkings to be fixed in centre as further security to gates, which are expected to be hung, so that with the least action they may be used eitherwise. The Contractor will be required to have *metal quadrants* and rollers of the best description, copper mounted where shown on Drawing No. 65. The gates to be secured to boxes in brestsummers and by strong rack-bolts, with handsome lever handles, &c., complete, of the weight of 2 cwt., properly wrought and manufactured, secured by good brass-warded tumbler-detector lock and strong staple, with 3 case-hardened keys and master key complete, value 4*l.* 10*s.*

A *jib or wicket-door* in the gates, framed in the same with strong rebates and steeled centres with good back and staple, value 2 guineas, and the steel to secure gates at fold to be drawn down by action of opening them as described to external gates. The fixed ironwork in *Fan* over gates is to be wrought in the best manner agreeably to drawing and to the size marked thereon, secured by seven corkings well let into stoneworks, and secured in the most firm and permanent manner to the brestsummer. All the spikes shown in drawings to gates and fan are to be sharply pointed, and the bands and neckings well secured to rails, all neatly riveted in. The gates and the works connected with the outer gates to be manufactured and cleaned off, hung and made perfect by an able and well-known smith, and equal to any similar work in the City of Westminster.

The *outer gates* to have a cast-iron *portcullis* in semi above the same, agreeably to Drawing No. 65, secured by massive corkings let into stonework as directed. All the cast-iron work to be very superior, particularly clean, well filed, and finished off, or the same will not be allowed to be fixed. The whole to be fixed with a sufficiency of pure lead in the best manner.

N.B.—Not any of the castings to be stopped or primed, nor to have anything done to them that might conceal defects.

Metal.—The cast iron for columns is to be of the white metal, and those for bearing purposes to be of the grey metal.

OCTAGONAL COURT-YARD.

Cast-iron cesspool, having 5 traps as shown by Drawing No. , to prevent effluvia ascending the drains, with strong flanches and back stays bolted together, where necessary, for the respective drains to intersect and be discharged into cesspool according to their level, and also with a valve or open gratings, 3 feet high, 2 feet 6 inches wide next sewer, to be acted upon from the upper surface on one side of the kerbstone, where *plugs* are to be fixed with lever keys to open and shut the same. The cesspool to be fixed in solid brickwork worked in cement and to be domed over, having 2 large iron rings let in flush to the stone coverings. The plugs to have iron cappings as directed to be hung on pivots with fastenings complete. The ironwork to be part wrought and part cast, and put together water tight.

Iron gratings, with 1½-inch bars and 3½-inch mesh, to the inside of sewers under boundary walls. The framework to be secured by corkings let into granite templates; the centre part 2 feet diameter, which is to be hung on centres so as to be occasionally let down for purpose of examination, well secured with a large padlock, brass-warded, case-hardened keys, and staples complete.

PLASTERER.

Provide all necessary scaffolding, tools and implements for the due execution of the works. The *laths* are to be rended out of the best prime clean yellow fir timber, of the thickness termed lath-and-half, and each lath to be well nailed at the ends, and not lapped one on the other.

The *nails* to be extra strong wrought, of a good and proper quality, and to be well driven into the timbers.

The *lime* to be from the best chalk-lime works, and of the best quality suitable for plastering, and used fresh as required, mixed with clean plasterer's sand and a sufficient quantity of the best buck hair in a perfect state; the whole to be well compounded, tempered and riddled together in proper proportions according to the nature of the work; or if any part should blister in any stage of the works, the defective parts to be cut out and made good with suitable materials.

The second-best plaster of Paris to be used in gauging all the ceilings, and such other plasterer's work as may require the same, and the best plaster of Paris for the cornices, entablatures, and all work run with moulds. The whiting, size, and colours to be the best of their respective kinds.

The *moulds* to be used to be lined with copper, and all the moulded work to be accurately run, and the mitres carefully put to in the best manner.

GOVERNOR'S HOUSE.

To lath, prick up, flote and set all the ceilings in chapel, also under galleries and in robing-rooms, and other parts where not arched.

Lath, prick up, flote, and stucco with rough bastard stucco all the partitions and battenings in chapel, chambers, principal and ground story.

Render two coats, flote and set the whole of the brick arches to ceilings, and render two coats, flote and stucco with bastard stucco all the walls except to passages and turnkeys' rooms on ground story; the staircases down from principal story and the kitchens are to be trowelled in Roman cement.

The chapel ceiling to be finished in compartments, agreeably to Drawing No. 11, with moulded frames round panels and ventilators, also cornices and entablatures all round walls, and on each side of screens or divisions for prisoners.

The lantern light to have entablature and mouldings round the same, as shown by drawing. All plain cornices to chambers to be 8 inches girth.

Run plain cornices round the rooms of principal story to intersect with mouldings of iron beams having moulded fascias below 12 inches girth in addition to the cornice.

Run plain cornices in passages and galleries of principal and chamber story 12 inches girth. The cornice in hall to be 15 inches girth, with plain medallions, as drawing.

PRINCIPAL TURNKEY'S AND MATRON'S HOUSES.

Lath, prick up, flote and set the ceilings to principal stories, and lath, plaster, flote and bastard trowel stucco all the partitions and battenings; render two coats, flote, and bastard trowel stucco all the walls except to passages and turnkeys' rooms on ground story, the staircases down to offices, and the kitchen, which are to be finished in trowelled Roman cement.

Pug the whole of the ceiling-floors over chapel, and over the principal stories of matron's and principal turnkey's houses, with good lime and hair 1½ inch thick, on strong fillets and double oak laths well nailed. Lath, plaster one coat the ceiling and partition to clock-room over chapel, to keep dust from works.

All the ceilings and cornices to the several houses to be well washed, stopped, and twice whitened, and the walls where not painted to be well washed, stopped, and twice coloured any tint approved. All the walls internally, where not described in Bricklayer's work, to be lime-whited, and to be so done by the plasterers. All the walls and battening behind the skirtings in the several rooms to be lathed and pricked up.

The porter's lodge, chamber, and office-room to be rendered, set, and trowelled in cement. to ashlar of ceiling and walls. All the plasterer's work required to complete the several parts of the prison to be executed in a good and proper manner, making good after the bell-hangers and other workmen, leaving the whole perfect at the conclusion of the business.

Specification of the City Prison, Holloway. J. B. Bunning, Architect. Erected 1852.

EXCAVATOR.

All *surplus earth*, &c., excavated for the erection of the prison, &c., is to be removed to the land belonging to the Corporation on the north side of the boundary wall; except so much as may be required for levelling the several yards, &c., as hereinafter described.

Excavate the earth to the several depths and widths shown on the drawings for the erection of the prison, pump-house, boundary and yard walls and dwelling-houses; also for the formation of the concrete foundations, air-flues for ventilation, sunk areas, and yards, &c., and all other purposes requisite for the due performance of the works, and for the formation of roads and paths.

Fill in and ram the earth against the walls and foundations where requisite for forming the surface of the ground abutting upon and surrounding the gaol, dwelling-houses, &c., and form the several sunk and raised levels and slopes shown or indicated on the drawings.

Provide, fix, and remove when necessary *all shoring*, strutting, &c., that may be requisite for the due performance of the excavator's works, and all pumps, labour, troughs, &c., for keeping the foundations free from water during the progress of the works.

Concrete. — Form the concrete foundation as shown on the drawings, and where otherwise requisite or described, with ground blue lias lime and coarse Thames ballast, in the proportion of 1 of lime to 6 of ballast, well mixed with clean water, and thrown into the trenches and excavations from a height of not less than 10 feet from the bottom, and properly spread and levelled as thrown in.

Fill in over the arches under the asphalted floors and roofs on the several stories with concrete, as before described, but rejecting all stones larger than a pigeon's egg; to be left to a perfectly level surface within 1¼ inch of the floor line.

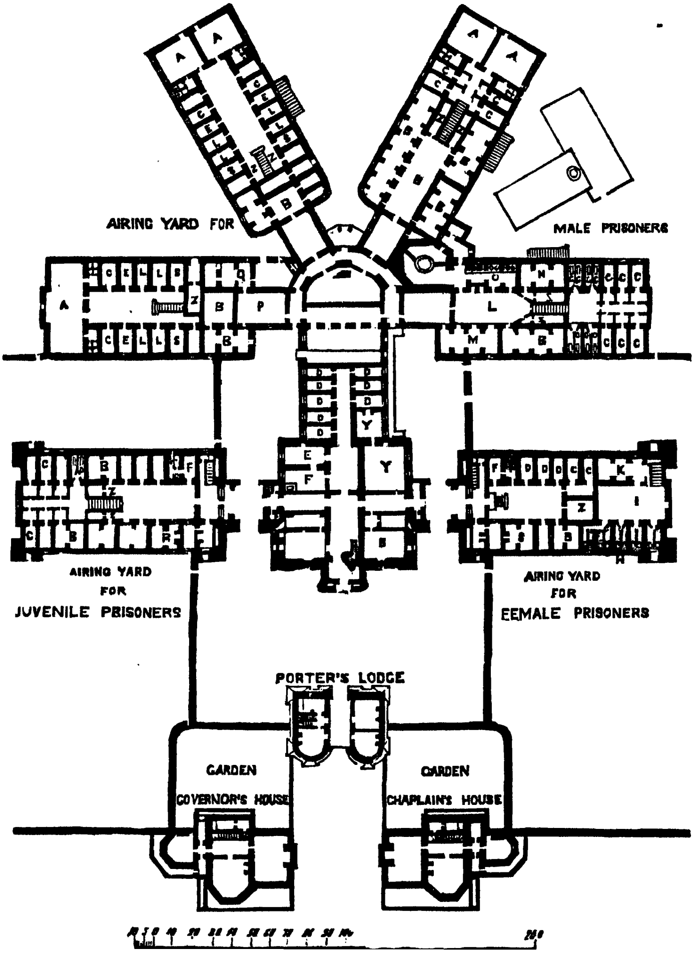
Provide and lay under all brick and stone paved floors and areas similar concrete where hereinafter described.

BRICKLAYER.

BOUNDARY AND YARD WALLS.

Materials.—Build the whole of these walls with the best description of hard-burned *stock bricks* and *mortar*, composed with 3

CITY PRISON, HOLLOWAY.



A Work rooms.
B Stores.
C Punishment cells.
D Reception rooms.
E Examining rooms.
F Reception room.
G Baths.
H Wash rooms.
I Laundry.
K Drying Closets.
L Kitchen.
M Scullery.
N Pantry.
O Boilers.
P Officers' mess room.
Q Officers' clearing room.
R Master's living rooms.
S Matron's living rooms.
Y Steward's room.
Z Ventilation apparatus.

parts of clean, sharp Thames sand from above bridge to 1 part of fresh-burned stone lime.

Face the several walls on both sides with picked stocks of an even and uniform colour; the joints to be drawn and struck on both sides.

Work.—The walls and piers to be built the several heights, form and thickness, and in the external boundary wall to the height of 8 feet above the top course of footings; in every 4th course of brickwork introduce into the wall two layers of hoop iron, 260 feet to the cwt.

Capping.—Finish the top of the boundary and yard walls (except where otherwise described) with the best description of solid semi-circular Staffordshire *brick capping,* 14 inches diameter, and as near the colour of the brick walls as possible, bedding and pointing the whole with cement.

Form the *corbels* under the upper part of the front wall with Lancashire bricks, similar to those for the coping, as per drawing. Form also the stone cornice, as shown, with Caen stone.

PRISON.

Materials.—Build the walls of the several buildings and the footings to the same with stock bricks and mortar, as before described (except where described to be in cement); the mortar to be made in a pug mill on the premises, and no greater quantity to be made at one time than is sufficient for the day's consumption; the whole properly mixed with clean water.

Work.—All the external fronts of the several buildings (except where otherwise described) are to be faced with the best picked stocks, of an even and uniform colour; and where the brickwork is not described to be covered with stone, plaster, or cement, externally or internally, the joints are to be drawn and struck.

Face the whole of the fronts and flanks of the dwelling-houses for the governor and chaplain with sound kiln-burnt red bricks, of the best description and of an approved colour; rake out the joints as the work proceeds, and point the same when directed with a neat flat joint with the finest mortar.

Form all requisite chases, indents, toothings, skewbacks, and openings; cut all rakes, splays, birdsmouths, &c., and provide all other articles of labour requisite for the due performance of the bricklayer's work.

The bricks are to be well drawn up, the joints properly flushed in, and the work grouted every 4th course, and no 4 courses to rise more than 11½ inches.

Hoop-iron bond is to be inserted in all the walls every 3 feet; 2 layers where they do not exceed 18 inches thick, 3 layers where above that thickness, and 1 layer in half-brick walls. Every length of 260 feet weighing 1 cwt.; the whole to be properly connected and in long lengths.

Cement works.—Where indicated on the drawings by a darker red tint, the brickwork is to be built the whole thickness in cement.

All the *cement* used is to be of a manufacture approved of by the Architect, and it is to be tested to his satisfaction before being used.

The *arches* under the several floors, as shown or indicated on the drawings, are to be turned the several thicknesses with ½-brick rings in cement.

The *arched roofs* of corridors, together with the abutments of the same, as shown in the drawings, and the walls below them, 2 feet 9 inches below the springing, to be built the whole substance in cement.

The *arches* over the cells on the upper story are also to be turned in cement the thickness shown.

The *joints* of all arches and brickwork built in cement, and to be lime-whited, are to be cleaned off and pointed when the centres are struck.

All *arches* both externally and internally, and over the several openings in the walls, and all discharging arches where requisite or directed by the Architect, are to be turned on proper centres in a sound and workmanlike manner, and proper solid skewbacks cut and formed to receive the several arches. The skewbacks for the arches under the floors on the several stories, and those over the cells on the upper story, are to be built in cement the whole thickness of the springing walls. Inverted arches, where shown or directed by the Architect, or requisite, are also to be turned with ½-brick rings the whole thickness of the walls, and the brickwork properly cut perfectly solid to receive them.

Trimmers, ½-brick in cement, to be turned to receive the slabs of the fireplaces.

Bonding courses to be formed in cement 4 courses high, and the whole thickness of the walls, under the ranges of windows in the several stories of wings and chapel buildings, and one course to each story in the front portion of the centre building; rake out the joints externally as the work proceeds, and point with mortar to correspond with the rest of the work.

On the *face* of the brickwork, where described, to be covered with Portland cement, the joints are to be raked out as the work proceeds, to form a key for the cement.

In the basement story form proper brick fenders, where requisite to receive the slabs of the fireplaces.

Asphalte Bed.—In the whole of the walls, and at the level below the basement floors, a bed of asphalte is to be formed the whole substance of the walls by the asphalte of Seyssel Company, and the brickwork to be properly prepared to receive it.

Chimneys.—Form the several fireplaces and the smoke-flues, the size shown in the drawings; well parget and core the flues, and continue the pargetting over the whole surface of the chimney backs; provide and fix over each opening of fireplace a wrought-iron chimney bar 2½ inches × ½ inch, properly turned up and down at the ends, and formed to receive the arch over the opening.

The *Kent rag-stone fronts,* and all other masonry, to be backed up in the most sound and workmanlike manner.

Tile Flats.—Form the several roofs and flats with plain tiles in cement, as shown or indicated on the drawings.

The *irons* for the hammocks are to be built in the cell walls in cement 2 feet long, 4 courses high, and to be fixed 6 inches higher at one end than at the other.

Cut grooves in the brickwork to receive the iron sashes and for all flashings. Point up to all iron windows, and to all frames built in the walls, and to all flashings with cement; and bed and point all window and door frames fixed after the walls are built.

Fill into the heads of iron skylights over covered way by kitchen with tiles and cement.

Fix all the cell and other iron windows and socket bars, also the pipes from the water-closets through the walls as the work proceeds.

Build all requisite dwarf walls under sleepers to floors.

Fees.—Give notice to the district Surveyor and pay him also his fees, and pay likewise all other fees incidental to the buildings that may be legally demanded.

Provision.—Provide in addition to the works described in this specification for 25 rods of brickwork for connexion of roofs and ventilation flues over the central hall above the springing of the arch.

Provide also in addition for 100 rods of reduced stock brickwork, 400 superficial yards, 3 course plain tiles in cement, 400 days each bricklayer and labourer; the same to be used where may be directed by the Architect, and if not so directed to be used, will be deducted from the amount of the contract at the prices affixed hereto for extras and omissions.

The Contractor is to provide all water requisite for his purposes, as the well on the premises will not be permitted to be used.

VENTILATION.

The whole of the interior of the ventilating shaft is to be rendered with lime and hair, and the large air-flues in the end walls of the front wings next the centre building, which communicate with the main air-flues under ground are to be pargetted.

Form air-flues 13½ inches × 4½ inches in the walls of the cells and other apartments, rendered smoothly inside with mortar.

Build the several walls to carry *the cisterns* in the roofs, and to form air-chambers in communication with the ventilating shaft as shown on the drawings.

Construct the main *under-ground ventilating flue* in cement, the arched bottom and the sides to be rendered with cement 1 inch thick, and covered with 3 course plain tiles in cement; where the flue passes under the buildings the walls are to be carried down to the depth required in cement, and where the flue passes under the open yards it is to be covered with 5-inch tooled York landings, joggled and run with lead.

Provide 42 feet superficial of 4-inch self-faced landings to carry the piers of door-ways in fence walls of the flue.

Lay 6-inch glazed stone-ware *drain-pipes* under the main flue with dry joints.

The *main flue* above described is to be filled into the sides and bottom with strewed pebbles not less than an inch diameter, or broken flints.

The walls forming the space for the ventilating apparatus; the walls in areas and to the passages to the same are to be carried down to the required depths for the flues, with half-brick arches turned over in cement with bonding courses, and the whole paved with stock bricks laid flat on a bed of concrete 6 inches thick; the inside of the passages to be twice lime-whited.

The *foul-air extracting flues* to be built and rendered with cement, and covered with 2 courses of plain tiles in cement.

The *cold-air flues* to be built in mortar and pargetted to tops, covered with 2 courses of plain tiles in cement.

The *flue* formed *for hot-water* pipes to be built in mortar, covered with 2 course of plain tiles in cement, but not pargetted.

The *smoke-flues* under the centre building to be built in and rendered with cement, and covered with 2 courses of plain tiles in cement, and where they pass under the open yards to be covered with 3 courses of tiles in cement; proper soot-doors to be fixed where required.

The warm-air flues under the chapel to be built in a similar manner.

The *four flues* for fresh air under the two back wings westward communicating with the areas, to be built in mortar covered with 2 courses of plain tiles in cement.

Where the flues under ground for ventilation pass the walls, arches are to be turned in cement, and the rendering, &c., continued through them.

Note.—The foregoing is collected from detached parts of specification.

PORTER'S LODGE.

Form the arched roofing with 3 courses of plain tiles in cement, as the prison roofs, and with similar concrete for asphalte.

PRISON.

The *brick arches* over windows and doors to be cut and set in fine mortar with rubbed splays.

Provision.—Provide 1 rod of brickwork, and 12 yards cube concrete for foundation under staircase in principal entrance hall.

Pave the dust yard with brick on edge on concrete 12 inches thick.

The *furnace room* to be paved as dust yard.

Stone-ware trap and basins to *water-closet* at porter's lodge.

The same to pump-house.

Concrete to the cells and corridors of pump-house, 3 courses of plain tiles in cement to form flat roof with concrete, 5 inches deep, gritted *asphalte* and fine concrete as before described.

Walls and top to be twice lime-whited.

Iron hooping cement bonding courses, picked stock facing, as described for main building.

Build cesspools 2-feet deep, 9-inch sides, and paved bottoms, under 9-inch gratings in channel at sides of wings.

Similar cesspools in yards under large sewer grates.

Sewer.—Excavate for and build the sewer shown on the drawing 2 feet diameter in the clear, with 4½ stock brick rim built wholly in cement, and the lower half rendered in cement on the inside. The sewer built to a fall of not less than 1½ inch to 10 feet, and properly connected with the main sewer in the high road in front of the prison.

Form the requisite air-holes in the sewer for the connexion of the drainage from the prison as shown.

Build the several gullies and trapped cesspools of the size and form indicated, and form the shoots from the same into the drains.

Fill in and well ram the earth to the sewer, cesspools, and gullies.

CARPENTER.

The *timber* to be Memel, Riga, or Dantzic fir, free from shakes, large or dead knots.

The *deals* to be the best description of Christiana, Geffle, or Stockholm, free from sap shakes or large knots, and to be well-seasoned.

The *oak* to be of English growth, and sawn die square, free from sap and well seasoned.

All the *carpenter's work* to be framed in the best manner, agreeably to the drawings, and to hold full the several scantlings thereon described.

Yellow deal boarding for roofs and flats, edges shot with all necessary furrings, &c., tilting fillets, large *lead rolls* and irons on ridges, &c., and rolls on flats. $1\frac{1}{4}$-inch yellow *deal gutters*, on strong framed fir-bearers, with all necessary rebated drips and cesspools, the gutters and flats laid to proper currents.

Joists and sleepers of ship oak to basement floors 4 inches square.

Provide all centring for brick arches, tile floors and roofs, and strong centring for masonry, with all requisite struttings, and all other centring of every description that may be requisite; also all necessary wood bricks for fixing the joiner's work, as well as all templates under the ends of timbers.

JOINER.

CENTRE BUILDING.

Floors.—$1\frac{1}{4}$-inch deal straight joint batten floor, tongued with iron $\frac{7}{8} \times \frac{3}{32}$ throughout, where not described to be of stone, asphalte, or brick. The floor to the sittings in the chapel not to be tongued. Inch-deal rough boarding, nailed to underside of joists, to form space for ventilation under the chapel.

Skirtings.—Narrow ploughed grounds, and inch-deal moulded skirting, 11 inches wide, to the ground, first floor, second and third ditto, housed into the architraves.

Windows.—Deal-cased sash-frames, oak-sunk sills 6 inches × 4 inches, 2-inch deal moulded sashes, double hung with patent lines, brass axle pulleys, iron weights, and brass patent sash-fastenings to the ground-story and to the front and return windows of the remaining stories. 2-inch deal ovolo sashes (fixed), with oak sills and fir solid frames to the small windows of water-closets, &c. 2-inch deal, moulded and fixed sash between the porter's rooms, with 1¼-inch double-rounded linings.

Linings and backings of inch-deal, tongued, staff-beaded and splayed. Inch-deal *window-board*, 3½ inches wide, tongued into oak sill, ploughed grounds, 2 inches × 1½ inch, and mouldings round same, 4½ inches girth, to the side windows under the chapel. 1½-inch deal, rounded window-boards to front and return windows, feather-tongued, with moulded hollow under front edge. Inch-deal tongued staff-beaded and splayed linings and backings to small windows.

Fir solid frames with oak sills, and 1½-inch deal square bar, fixed sashes to blank windows over gateways.

Doors.—2-inch 4-panel doors moulded both sides, to the first, second, and third floors, 1¼-inch rebated and double-beaded jambs. Inch framed and ploughed grounds, 4½ inches wide, and moulding one side, 4½ inches girth, 4-inch butts, mortice locks, prime cost 15*s.* each, except to two doors P. C. 10*s.* each. The square-headed doors on the upper story to have grounds and mouldings on both sides. 1½-inch 4-panel doors to all water-closets, framed, bead-flush both sides, 4-inch butts, brass spring mortice latches, prime cost 5*s.* each.

Sash Doors.—1¼-inch rebated and double-beaded jambs, inch framed grounds, 4½ inches wide, and mouldings on one side, 4½ inches girth, 2½-inch deal folding-doors, the lower part 1 panel square, filled in on both sides with mouldings, 3½ inches girth; the upper part prepared for and filled in with cast-iron moulded sashes, 11½lbs. per foot superficial, 4-inch butts, locks, prime cost 10*s.* each, and farther fastenings 10*s.*, to each door. Fir proper door-cases, 5 inches × 5 inches. 1¼-inch tongued and staff-beaded linings at each end of corridor, between entrance-hall and prison.

Chapel.—2-inch deal 4-panel moulded and bead flush *doors* to chapel, 4-inch butts, 2-inch rebated and beaded jambs, 5 locks, prime cost 15*s.* each, and 4 ditto P. C. 10*s.* each.

Ground-floor Entrance Building.—2-inch deal 4-panel *doors*, moulded both sides to the ground-story, 4-inch butts, mortice-locks, prime cost 15*s.* each. 1¼-inch deal, rebated and double-beaded jambs, inch framed grounds, and mouldings on the room side 4½ inches girth.

Basement.—2-inch deal 4-panel bead flush *doors* in the basement story, 4-inch butts, mortice-locks, prime cost 15*s.* each, fir proper door-cases, 4 inches square, oak sills and mouldings, 4½ inches girth on one side.

2-inch deal folding *external doors* under the gateways, framed bead flush both sides, 4-inch butts, locks prime cost 10*s.* each ; 15-inch and 24-inch brass-knob barrel bolts to each door, fir proper door-cases, 5 inches × 4 inches, mouldings inside, 4½ inches girth.

Steward's Rooms and Furnace.—2-inch deal 4-panel bead flush both sides, external *door* to steward's room and furnace room, 4-inch butts, locks prime cost 10*s.* each, and two 12-inch brass-knob bolts to each, fir proper door-cases 5 inches × 4½ inches, mouldings inside, 4½ inches girth.

Entrance Doors.—2½-inch deal framed and braced *folding-doors* to front entrance, lined on both faces with inch oak boarding, 7 inches wide, rebated and beaded, hinges and fastenings, prime cost 10*l.* exclusive of fitting and fixing. Oak proper door-case 6 inches × 6 inches. Provide 28lbs. wrought iron and 14lbs. lead for running to secure the frame to the stonework, and a small flap with hinges, grating and latch made in the door.

All external *door-cases* are to be tenoned into the stone steps, which are to be properly morticed to receive them.

Water-closets.—1¼-inch deal seats, and risers, and bearers, with moulded clamped flaps, and frames, and narrow skirtings on grounds, 1½-inch ploughed and tongued and dove-tailed deal cisterns, with pipe casing, and double grounds.

The *water-closet seats* and risers on the ground-floor to be of inch Honduras mahogany, with narrow mahogany skirtings, having the cisterns enclosed with inch-deal, framed and beaded fronts, and small door, 2½-inch butts and brass buttons on plates, and the undersides lined with ¾-inch deal, matched and beaded boarding, all the closet-flaps to be hung with 2½-inch brass butts.

Washing Places.—Inch Honduras mahogany tops, and narrow mahogany skirtings and grounds. The fronts enclosed with inch Honduras mahogany, framed and beaded, with 1-panel bead flush and square doors, 2½-inch brass butts, a spring latch, prime cost 5*s.* Inch deal shelf and bearers in each closet, and a mahogany paper-box in each water-closet.

CHAPEL FITTINGS.

Pew-fronts.—1½-inch deal bead flush and square, 2 panels high, with moulded capping, 5½ inches girth, inch-deal, ploughed and tongued backs to sittings, beaded on both sides.

1¼-inch deal, 2-panel bead flush both sides, *doors* to the same, rebated, hung with 2½-inch butts, with 1¼-inch hanging stiles on standards, framed, rebated, and beaded iron-hoop stop to doors 1¼ inch wide, with ½-inch screws, countersunk 6 inches apart.

1¼-inch deal *seats* to front sittings wrought both sides and rounded, with cut brackets, bearers cross-grooved and dove-tailed, and chamfered fillets 2 inches wide as stops to doors, ¾-inch deal rough casing under the same and chamfered fillets.

Book-boards of inch deal, wrought both sides and cross-tongued, fixed on splay to circular-sweep, with splayed edges on chamfered bearers.

Officers' Pew.—1¼-inch deal, 2-panel, bead flush and square framing, and doors with hanging stiles as before described, 2½-inch projecting butts, brass pulpit-latches. Inch-deal, double-beaded and grooved capping, with seats as described to the other pews.

Organ Gallery.—1½-inch deal, bead flush and square framing, and doors, 2½-inch projecting butts, and brass pulpit-latches, with moulded and grooved capping, and inch-deal, moulded and grooved backings, with moulded nosings.

Steps.—1¼-inch oak steps and risers, with rounded nosings to staircases and sittings, glued and blocked on strong framed carriages, 1½-inch deal raking framed wall strings and outer strings, with capping, and housed for steps. 1¼-inch oak nosings 6 inches wide to edges of floors and landings. Deal-turned newels, square bar balusters, and wainscot moulded handrails. A portion of the string-boards to be cut and mitred with returned cut nosings to the steps. Fir-framed joists to the landing 7 inches × 2½ inches, and plates 4 inches × 3 inches. Inch-deal moulded and beaded boarding, and small quartering to the canted angles.

Wall Lining.—¾-inch deal, matched and beaded boarding, 5 feet 9 inches high, to walls on rough battens, 3¼ inches × 2¼ inches to wall, and rough fillets on floor, and 1¼-inch rebated and double-beaded grounds, 3 inches wide, plugged to wall and grounds for plastering.

Inch-deal, wrought, ploughed, tongued, and beaded boarding, 6 feet high, at back of upper seats, and beaded capping, 2-inch deal framing, bead flush both sides, to divide passages to pews, and moulded capping, 10 inches girth. Fir-framed octagon newel 7 inches × 7 inches, with moulded plinth and cap. Wrought-iron standards to secure the framing as per drawings, fixed with screws countersunk.

1¼-inch 2-panel latch-doors, bead flush both sides, 2½-inch butts brass pulpit-latches, and chamfered stops.

Gallery.—1¼-inch yellow-batten floor by pulpit, the steps and risers glued and blocked, 1½-inch deal, bead flush and square framed gallery front, with mouldings, 2½ inches girth, laid in panels. Inch-deal capping, 4 inches wide, rounded on both edges, and mouldings 4 inches girth. Inch-deal book-boards, wrought both sides, with cut brackets and beads 1½-inch wide. 1¼-inch deal moulded fascia, beaded and grooved.

Divisions and Doors.—1½-inch deal, bead flush both sides, with double-beaded capping, and framed hanging stiles, 2½-inch butts, and brass pulpit-latches. 1¼-inch deal rounded seats and framed standards, with clamped flaps and hinges. 1¼-inch deal bead-flush wall-framing, 3 feet 6 inches high, with beaded capping, tongued at angles.

Communion Steps.—Form the raised floor with steps to ditto for communion.

Provide for altar-railing, altar-piece, and also writing for same, prime cost 40*l.*

Provision.—Provide in addition to the works described in this specification, 600 feet cube, fir framed; 400 days carpenter; 12 squares centring to arches; 20 squares groined ditto; to be deducted, if not directed to be used.

For the fittings in the chapel, provide and fix to the doors of seats next passage, 3-inch brass drawback latches, and fastenings to all the pew-doors similar to those at Pentonville Prison.

WINGS A AND B—BASEMENT.

Floors.—1¼-inch yellow-deal floors, iron-tongued, with ship-oak joists and sleepers, 4 inches × 4 inches, for the master's, matron's, and porter's rooms.

Doors.—In these rooms 2-inch bead flush both sides, 4-panel, solid doors, feather-tongued, Gothic heads, fir proper door-cases, 4 inches × 4 inches, with oak sills, 4-inch wrought butts, and 7-inch mortice locks, with plain brass furniture. Mouldings round door-cases on one side 4½ inches girth.

Similar door-frames, doors, mouldings, and ironmongery as last to the reception-room, staircase, and hall.

To the baths and water-closets, the reception-room, and punishment cells, provide 1¼-inch 4-panel square framed doors, with proper door-cases and oak sills 4 inches square, 3½-inch butts and strong brass knobs, spring mortice latches.

1¼-inch clean deal seats and risers, and bearers, clamped flaps and beaded frames to shift, 2½-inch brass butts, narrow skirtings and grounds.

Lobbies to Punishment Cells.—2-inch 4-panel bead flush both sides doors, proper door-cases and oak-sills, 4-inch wrought butts, and fixing only a prison lock on each door.

Doors.—Provide similar door-frames, doors, ironmongery, &c., at foot of stairs leading to punishment cells, the frames tenoned into the stone steps. The outer door at end of B wing to have a proper Gothic-headed frame 5 inches × 4 inches, tenoned into the stone step, with moulding inside, 2-inch folding, 4-panel bead flush both sides door, with 1½ pair of 4-inch wrought butts; provide and fix 7-inch mortice lock, 15-inch and 24-inch barrel-bolt.

Clothes' Stores.—Provide for fittings 20*l.* in A and B wings.

Ventilating Apparatus.—Provide inch proper ledge doors, door-cases 4 inches × 4 inches, and oak sills, 24-inch cross garnet hinges and 7-inch stock locks.

Cisterns to water-closets in basement of these wings, 5 feet 3 inches × 2 feet 9 inches × 2 feet, 1½-inch deal, ploughed and tongued bottoms, dove-tailed rims, strong fir-framed bearers, fronts enclosed with inch framed and beaded framing, and 1-panel doors hung with 2-inch butts, and a brass button on each door, ¾-inch rebated and beaded boarding, soffits, ¾-inch beaded pipe-casing and grounds.

GROUND-FLOOR, A AND B.

Doors.—No. 18. Proper *door-cases* with oak sills, 4 inches × 4 inches, 2-inch 4-panel bead flush both sides *doors*, 4-inch wrought butts; provide and fix a prison *lock* of the prime cost value of *15s.* on each door to the warders' rooms, mess-rooms, and visiting-rooms, and at each end of corridor.

The *external doors* to the passages between the cells to have Gothic-headed proper door-cases, 5 inches × 4 inches, tenoned into the steps, 2½-inch 4-panel bead flush both sides solid panel doors, feather-tongued, 4-inch wrought-iron butts; and provide and fix a prison lock on each door, prime cost 15*s.*

ONE-PAIR FLOOR, A AND B.

Doors, 10 in number, to warders' rooms and chaplain's ditto, with proper door-cases and oak sills, 4 inches × 4 inches, 2-inch 4-panel doors, bead flush both sides, Gothic-headed, 4-inch butts; provide and fix a prison lock on each door.

No. 2. Similar *door-cases*, and ironmongery at end of corridor, but without oak sills

Doors, 10 in number, to warders' rooms, with fir proper *door-cases* and oak sills, 4 inches + 4 inches; 2-inch 4-panel bead flush both sides doors, 4-inch butts, and provide and fix prison *lock* on each door.

Stairs in Wings.—1¼-inch English oak treads, wrought both sides, scribed to the ironwork, screwed from underneath with 1¼-inch stout screws.

Wings C and D have like Specification as A B.

LAUNDRY.

Washing-troughs of 1¼-inch deal, dove-tailed, and put together with white-lead, leaving them all perfectly water-tight, and prepare them for plumbers; fix on the top round 3 sides inch-rounded boards, fixed in grooves formed in the brickwork, and pointed round with cement, to prevent the wet getting into the brickwork, inch-deal casing to be fixed round the pipes, with holes cut for ditto. The troughs to be supported on stout fir bearers let into the walls, with a trough to carry off the waste water.

10 *deal gratings*, similar to those for the baths, for the prisoners to stand on.

The *doors* to be of 1½-inch deal, in 4 panels, bead flush and square, the upper panels to be filled with 21 ounces corrugated glass, 3½-inch *butts*, and *lock* prime cost 5*s.* The doors to be hung to fir proper *door-cases* 4½ inches × 3 inches, tenoned into stone.

The *water-closet* to be fitted up as described for the closet near the baths, door-frame and door as ditto.

Trough and outlet for steam, which is to be conveyed to the flue from the drying stove.

The *floors* to be of asphalte on concrete, as described for the other floors of the wing. The walls to be limewhited.

CARPENTER.

GOVERNOR AND CHAPLAIN'S HOUSES.

The *several floors*, *roofs*, and other carpenter's work to be framed with timbers, in the manner and of the scantling shown on the drawings. Inch-deal battens for slates, 3 inches wide, and inch-deal eaves-boards. Tilting fillets where necessary, and rounded ridge rolls.

Inch-deal boarding, jointed for lead to dormers, inch-deal proper ledged *dormer trap*, and fir proper door-cases, 4 inches × 3 inches, with oak-wrought sills, 4 inches × 2 inches. 18-inch cross garnets, and 6-inch neck-bolts. Inch-deal proper ledged inner traps and rounded linings.

Provide 1 cwt. of wrought-iron straps and bolts to roofs over dining-room buildings, and 4 cwt. cast-iron shoes to trusses of roofs, &c.

Form proper *cesspools* and rebated drips in gutters and lead rolls.

1¼-inch *gutter*, with bearers 4 inches × 2 inches; fix all requisite ironwork to timbers, struttings to joists. Trimming joists ½-inch thicker than common joists. Bond to window-sills and wood bricks to all jambs; all floors above the basement are to be *pugged*. Fir lintels 4 inches thick, the width required.

JOINER.

THREE-PAIR STORY.

1¼-inch yellow straight joint batten *floors*, iron-tongued, with mitres and borders to slabs.

Inch-square skirting, 9 inches wide, and backings with narrow grounds, and fillets on floor, tongued at angles; square angle staves.

TWO-PAIR STORY.

Floor as above. Inch torus skirting 9 inches wide, with tongued and mitred angles; narrow grounds and rough fillets; beaded angle staves.

ONE-PAIR STORY.

Floor as above. Skirtings, grounds, and fillets as above, skirting housed into architraves; square angle staves and beaded angle staves.

GROUND-FLOOR STORY.

Floor as above. Inch rebated and sunk plinth 15 inches deep, and backings, narrow grounds, rough fillets, tongued and mitred angles, with housings to architraves, beaded angle staves.

BASEMENT.

Floor.—1¼-inch yellow deal, tongued with iron on ship oak, joists and sleepers 4 inches × 4 inches, square angle staves.

THREE-PAIR STORY.

Doors.—6 feet 9 inches × 3 feet, 1¼-inch 4-panel square, 3-inch *butts*, 7-inch 3-bolt brass-knob *locks*, 1¼-inch double-rebated and double-beaded jambs, inch-framed grounds grooved for plastering mouldings, 4 inches girth, dove-tailed blockings to jambs, and wood bricks.

TWO-PAIR STORY.

Doors.—6 feet 9 inches × 3 feet, with fittings and ironmongery as above, 2½-inch square-framed partition, and doors hung with 3-inch *butts* and 7-inch knob *locks* to the room doors, and *turnbuckle locks* to closet doors.

ONE-PAIR STORY.

Doors.—Gothic moulded, 4-panel both sides, 4-inch brass rising butts, 8-inch mortice *locks*, and ebony *furniture* on both sides.

1½-inch double-rebated and double-beaded jamb *linings*, feather-tongued, inch-framed grounds 6 inches wide, with mouldings 5 inches girth.

Closet Doors.—Single-rebated jambs and mouldings, water-closet doors to have brass spring latches, cupboard doors tumbler locks, dove-tailed blockings to jamb linings.

GROUND-FLOOR.

Doors.—2-inch 6-panel Gothic moulded both sides, upper panels with faint Gothic heads with oak keys, 4-inch brass rising *butts*, 8-inch *mortice locks*, and ebony furniture on both sides, 1½-inch jamb linings, double-rebated, the circular heads to be cradled and canvassed. Grounds and mouldings as above story, water-closet doors as before described, with spring latches and private bolts.

Front and back doors of 2½-inch deal, 2-panel margined, bead flush one side, the other with 1½-inch moulded ribs, Gothic-headed, with oak keys, fir proper door-cases 5 inches × 4 inches, with Gothic heads, oak keyed, and tenoned into steps. Inch-tongued and rounded linings inside, inch-framed grounds, 6 inches wide, mouldings 5 inches girth, 10-inch mortice *drawback locks*, two 8-inch brass flush bolts to each door, and brass barrel bolts.

A door similar to the room doors in the opening between hall and staircase, with similar linings.

BASEMENT.

Doors.—1½-inch 4-panel, square framed, 3-inch *butts*, 7-inch iron-rim *locks*, 1¼-inch rebated jambs and beaded, inch-framed and grooved grounds 5 inches wide, and quirk OG beads both sides; a patent wine-cellar door-lock, prime cost 21*s.*; a water-closet private latch; Norfolk latches to coal-cellar, the 2 upper panels of larder-door filled in with copper wire gauze, fixed with beads.

Water-closets to each house, No. 3 *cisterns*, of 1½-inch deal, dovetailed on strong bearers, ploughed and tongued bottom, 1¼-inch bead flush framing, and door to enclose cistern, 3-inch brass butts, and brass-knob turnbuckles, ¾-inch beaded pipe-casing and grounds, with 2-inch brass butts and turnbuckles, inch Spanish mahogany (2 water-closet) *seats*, risers, and clamped flaps and beaded frames with moulded nosings, 3-inch brass butts, ¾-inch Spanish mahogany moulded skirting, 6 inches deep; the whole French polished with spirits of wine, and made to shift, holes cut for seats, and beaded round handle.

Water-closet in basement to have 1¼-inch clean deal seats and risers, clamped flaps and beaded frames, 3-inch brass butts, ¾-inch deal skirting 6 inches wide, with narrow grounds, pipe casing, beaded and hinged with 2½-inch butts, and a turnbuckle.

Washing-closet on first floor, with 1½-inch bottom and dovetailed sides, 1¼-inch 1-panel square framed enclosure, and door under, with 2½-inch butts and brass-knob turnbuckle, 1¼-inch clamped flap and beaded frame, with 3-inch brass butts and pipe-casing as before.

Dresser.—7 feet long, 2 feet 6 inches wide, ¾-inch matched and beaded wall-linings, inch-framed and beaded fascias and soffits with moulding, three 1¼-inch sunk shelves, housed into standards, 1½-inch cut standards, 1¼-inch back and end rails 9 inches wide, framed and beaded legs and rails, ¾-inch deal bottoms and dovetailed sides, 1¼-inch fronts, wainscot glued sliders, inch-deal pot-board, risers and bearers, No. 3 japanned knobs to each dresser, 2-inch clean deal, feather-tongued, glued and button-blocked top and bearers.

Closets in Kitchen.—1½-inch square framed and beaded *fronts*, 7 feet high, with 4-panel square framed *doors*, 3-inch butts, closet *locks*, 1¼-inch tops, and two 1¼-inch deal *shelves* in each, and bearers, OG mouldings round doors.

Dresser in Larders.—1½-inch deal-dresser top, and bearers 10 feet long 2 feet wide, with inch-skirting 9 inches wide, 1 shelf 10 feet long, 1 foot wide, upon framed legs and rails, the legs tenoned into pavement and the shelf on cut brackets.

Chimney-shelves of 1½-inch deal 12 inches wide, on cut cantilever brackets, rounded corners.

Closets on three-pair and two-pair stories, 7 feet high, 4 feet wide, 12 inches projection, 1½-inch square framed and beaded fronts, and square framed doors, 3-inch butts, mitred stops, and tumbler closet locks, 1¼-inch ends square framed angle beads, inch top with rounded edge, mouldings round doors, two 1-inch deal shelves on chamfered bearers.

Closets on one-pair 7 feet high, 4 feet wide, 12 inches projection, with 1½-inch framed and beaded fronts, moulded and square doors and moulded and square ends, angle-beaded, inch tops with nosings and hollow, and mouldings round doors 5 inches girth, two 1-inch shelves, with chamfered bearers in each closet.

Windows.—Deal-cased frames with Gothic heads outside, square inside, oak sunk sills, 1½-inch Gothic moulded sashes, double hung patent lines, brass axle pulleys, iron weights, and patent sash fastenings throughout.

Window Finishings.—Three-pair and two-pair stories.

Narrow grounds and mouldings 4 inches girth, with moulded nosings, sill pieces and wood bricks.

ONE-PAIR STORY.

1½-inch 2-panel moulded and bead butt front shutters in 2 heights, 2½-inch butts, 18-inch spring shutter-bars, ebony shutter knobs, inch 2-panel bead flush splayed back linings, 1¼-inch moulded soffits, backs and elbows, beaded cappings tongued at angles, 1½-inch proper boxings, mouldings 5 inches girth, ¾-inch beaded return linings and backings.

GROUND-FLOOR.

As one pair, but 1¼-inch 2-panel, moulded and bead butt back flaps to shutters, and 1½-inch backs, elbows and soffits moulded, 1½-inch back flap hinges, and 3 feet and 3 feet 6 inches shutter-bars, according to opening.

Glass.—Chance's patent plate to all sashes on ground, one, two-pair and three-pair stories, properly puttied and back puttied.

Sashes and frames to basement as last, but with the upper sashes Gothic-headed, patent sash fastenings, 1¼-inch 2-panel bead flush and square shutters in one height, 1¼-inch clamped flaps, 2-inch back flap hinges, 2½-inch butts, brass shutter knobs, iron bar fastenings the width of the windows, inch 2-panel bead butt back linings, 1¼-inch tongued and staff-beaded soffit, 1½-inch flush bead window back, 1½-inch proper boxings, with beaded caps.

Glaze the sashes with seconds crown glass, well puttied and back puttied.

A step-ladder is to be provided on the upper story of each house, with wrought-iron hooks and eyes to traps.

Sound boarding of ¾-inch, and fillets to the two-pair, one-pair, and ground-floor.

Spandril to Basement Stairs.—2¼-inch deal moulded spandril sash, 7 panes wide, Gothic-headed, 1 pane high, filled in with rough plate glass 15 inches wide, as per drawing, with 10 iron stubs and straps, with mortices run with lead.

Door to Stairs.—2-inch, 4-panel, Gothic moulded both sides door, with door-case 4 inches × 4 inches, Gothic-headed, the door hung with 4-inch butts, mortice lock with ebony furniture.

Bold Handrail of Spanish mahogany, 3 inches × 2½ inches, French polished, grooved for iron core, turned and mitred caps, and handrail screws from ground floor to upper story, handsome cast-iron newel balusters 1 inch × ⅝ inch. Cut all holes for balusters, and run the same with lead, iron core 1 inch × ½ inch.

CARPENTER AND JOINER.

PORTER'S LODGE.

Floors.—Frame the several timber *floors* with fir timbers of the scantling and in the manner shown on the drawings, and lay the same with 1¼-inch yellow deal, ploughed and iron-tongued on the ground and one-pair stories, inch square skirting board wide, and narrow ploughed grounds.

Staircase of 1¼-inch yellow-deal treads and risers, rounded nosings, 1½-inch wall string, 1¼-inch close outer string, strong fir carriages, steps and risers housed, glued and blocked deal bar balusters, turned newels, wainscot moulded handrail, 1½-inch square framed spandril under kitchen stairs, with framed and beaded front, and 4-panel square framed door, wrought and beaded stops, 3-inch butts, 5-inch spring knob lock.

Framed partition of 2-inch deal square, and door forming lobby on one-pair story, wrought and beaded stops, 3-inch butts, and 5-inch spring knob lock.

Doors.—2 inch, 4-panel, bead flush and square, 3-inch butts, and 5-inch spring locks, 1¼-inch rebated and double-beaded jambs, inch-framed grounds, 4½ inches wide, and mouldings on both sides, dovetailed blockings.

Partition of 2-inch bead flush, and square framed, and door to water-closet, hinges and lock as other doors.

A *dresser*, shelves, sink, closets, and other fittings to be provided and fitted, of the value of 20*l.*

Water-closet.—1¼-inch clean deal seat and riser, with clamped flap and beaded frame, 2½-inch brass butts (to shift), plain skirting 4½ inches wide, 1½-inch deal dovetailed cistern, with 10lb. lead bottom, and 7lb. lead sides.

The *external doorways* to have 2-inch, 4-panel doors, bead flush and square, Gothic-headed, and door-cases 4 inches × 4 inches tenoned into the step, mouldings inside, 4-inch wrought butts, and 10-inch drawback lock.

1½-inch, 4-panel square framed doors to the kitchen and pantry, with linings, grounds and mouldings, as described, to the upper story.

Sashes and frames, as described to the governor's and chaplain's houses, with narrow grounds, OG moulding, and bold nosings, glazed with 16 oz. sheet-glass.

Gates and Portcullis.—2½-inch deal framed, ledged and braced folding-gates, covered on both sides with inch oak boarding, 6 inches wide, wrought one side, rebated and beaded; a wicket-gate, 5 feet 9 inches × 2 feet 6 inches; inch oak double beaded capping to gates, 4 inches wide, rounded on both edges, and screwed on hinges and fastening, value 10*l.*

No. 2 portcullises formed of 2½-inch deal bars, 5 inches wide and inch deal facings, with carved points as per drawing, securely fixed in chase in masonry.

Pump house.—Doors of 2-inch 3-panel bead flush, upper and lower panels open, 4-inch wrought butts and locks, prime cost 5*s.* ¾-inch wrought-iron bars, 3 to each lower panel.

Fir proper *door-cases* 4 inches × 3 inches, oak sills 4 inches × 4 inches, and wood bricks, wrought-iron hooping and fixing to frames.

Casings to machinery of ¾-inch matched and beaded, with 1¼-inch rebated and beaded rims, a 1½-inch wrought and rounded deal seat, 21 inches × 11 inches in each cell, with wrought chamfered and tapered bracket.

Water-closet.—2-inch, 4-panel bead flush both sides, framing and door, 4-inch butts, and thumb-latch. 1¼-inch deal-wrought *seat*, *riser*, and bearers, clamped flap, and frame, 2½-inch brass butts, and narrow skirting to water-closet.

Outer Doors.—2-inch, 4-panel bead flush both sides, Gothic-headed, 4-inch butts, prime cost lock 7*s.*, strong thumb-latch to each door, and two 10-inch strong wrought bolts to one door, fir proper *door-cases* 5 inches × 4 inches, with wood bricks and tenoned into steps.

1½-inch ploughed and tongued cistern bottom, with dovetailed rims, and strong fir framed bearers and casing to pipes.

Baths.—Inch-deal wrought one side rims, with rounded edges, tongued and double cross-grooved; fit up 1¼-inch deal seat, 18¼ inches × 11 inches, with wrought 1¼-inch chamfered and tapered bearers; and provide a 2-inch deal framed grating in each bath-room, as shown on the plan.

An *office for the Clerk of the Works*, as per drawing, to be formed and fitted up where directed.

FENCES AND GATES TO SOUTH FRONT.

Provide and fix, agreeably to the plan, oak cleft *park fencing* pales, 5 feet 3 inches high, with three 4-inch oak arris rails, posts 9 feet long, 6 inches × 4 inches, 8 inches × 3 inches from centre to centre (2 in a rod); the rails to be housed and pinned into the posts, the whole clear of sap; 2-inch oak plank, 9 inches wide, with rebated top to receive the pales. Dig the requisite post-holes, and well ram to the posts.

Provide a gate and posts, and stops, 3 feet 6 inches wide, with hinges and mortice-locks.

Provide and hang an oak wrought and framed *park-gate* and posts, as per drawing, with proper hinges and fastenings, prime cost 70*s*., and iron bars as shown; the gates, &c. to be twice varnished with copal varnish. The posts to have oak cappings as shown. Provide and fix 4 similar fences at front and rear of the governor's and chaplain's houses, as shown with No. 6; *gates* in ditto of oak wrought and chamfered both sides, with oak bars 2¼ inches diameter, and the gates 4 feet 6 inches wide, with wrought oak posts, 7¼ inches square, capped, as per drawing, and varnished.

MASON—EXTERNALLY.

Kentish Rag Facing.—Provide and face the whole of the south front of the prison and the 2 returns or flanks of the same above the ground, also the whole of the ventilating tower above the roofs of the prison, and the whole of the building forming the entrance or porter's lodge, with the best description of large rough Kentish ragstone, coursed header work, hammer dressed, free from hassock and soft border, averaging 9 inches on the bed in parallel courses, varying in height from 5 to 9 inches, well bedded in mortar, grouted full every 2 feet in height, and securely bonded together with 2 bonding stones to tail 14 inches into the brickwork (in addition to the bed), in every superficial yard; the joints raked out as the work proceeds, and pointed with blue mortar where directed.

The masonry to be built battering where so shown. The Kentish rag parapet to be built solid, fair axed on both sides, and finished on faces as *ashlar*, picked backs and axed beds and joints. Build all solid Kentish rag *quoins* and *arches* where requisite or shown on the drawing.

All ends of Kent rag against Caen stone quoins worked fair and notched where requisite.

Caen Stone Dressings.—The several quoins to the Kentish rag-work, also the door and window jambs and heads, window sills, labels, plinths, cornices, mouldings, copings, battlements, arrowlets, parapets, cappings to chimneys, moulded corbels, and bosses, mullions and tracery, and wherever else indicated by the drawings to the buildings faced with Kentish ragstone, to be formed with Caen stone of the best quality and description properly worked, jointed, and bedded in the most sound and workmanlike manner, with 3-inch *York bond stones* where necessary. *Slate dowels,* plugs, run with lead; 9-inch galvanized wrought-iron *cramps* properly run with lead wherever requisite or directed for the proper security of the work.

The same description of Caen stonework is to be provided and executed to the red brick fronts of the dwelling-houses for the governor or chaplain agreeably to the drawings.

The chimney-shafts to these buildings are also to be built with Caen stone agreeably to the drawings, and the dormer windows of the chapel are also to be formed with similar stone.

The *arrowlets* are to be filled in with ¾-inch *slate* with rubbed face.

Granite.—No. 8 granite *spurstones* 3 feet 10 inches high to gateways each side of centre building, 18 inches square as per drawing.

The front gable of the chapel to be faced with Kentish rag *ashlar.*

Parkspring Stone.—The jambs, heads, and sills forming the opening of the cell window and the doorways corresponding therewith, in the south front of the prison, are to be formed agreeably with the drawing with the best description of Parkspring stone, properly worked, jointed, and bedded, and securely fixed with plugs and cramps run with lead.

The remainder of the cell and room windows throughout the prison (except where of Caen stone), are also to be of Parkspring stone; the sills of the chapel windows are also to be of similar stone; the whole to be properly worked, sunk, and throated, each sill to be in one piece of stone, the length required and the scantling shown on the drawing. Cut all requisite grooves in the masonry to receive the cast-iron sashes and wrought-iron bars.

All steps to external doorways are to be of Parkspring stone, solid and rubbed, 12 inches × 7 inches, the length required, and mortised to receive the door frames where requisite, and with rounded ends.

Paving.—The kitchen, scullery, the dishing-up room and officers' cleaning room, to be paved with 3-inch *Parkspring paving* in courses on concrete 12 inches thick.

To the Governor and chaplain's houses, Parkspring kerbs 12 inches × 7 inches, rubbed and chamfered, 2 edges double plugged and run with lead.

The entrance hall, corridor, passages, fumigating room, and staircases, to be paved with 3-inch Parkspring paving on a layer of fine concrete and a bed of concrete 12 inches thick; no stone less than 10 feet superficial, the whole rubbed on face, square jointed, and bedded and pointed with cement.

Staircases.—All internal staircases in the prison (except where described to be of iron or deal) are to be formed of Parkspring stone, the steps 12 inches × 7 inches rubbed and solid, except in the centre building, which are to be feather edged, the whole properly cut and pinned into the walls, rebated and back-jointed. All landings and spaces to be of similar stone, 7 inches thick, properly joggled where requisite and run with lead, also to be rubbed on face, and winders the requisite width, the whole properly morticed to receive the balusters.

The *staircase* in the entrance hall to have 2 solid bottom steps 13 inches × 6½ inches with semi ends, and the remainder of this flight to be feather edged 13 inches × 7 inches, with winders the requisite width, and 7-inch Parkspring landings, with rebates and back joints, and rubbed two sides.

The *entrance steps* to be 7-inch risers, and the width shown.

The *external staircases* to the wings to be of Parkspring stone, 7-inch risers, solid and securely pinned into the walls, with holes cut for the balusters, and 7-inch landings, the lower steps to have brickwork and concrete under them.

The *staircases* to the rooms at end of the corridors in the prison to be of solid Parkspring stone, bottom step, 20 inches × 7 inches; flyers 11 inches × 7 inches; and 7-inch landings joggled and leaded; the bottom steps to be bedded on brickwork and concrete.

The *doorways* in the yard walls to have Parkspring solid steps, 12 inches × 7 inches, with Parkspring capping on the piers 6 inches thick; also over the doorways in the walls to project 2 inches on each side, and plugged and run with lead.

The principal staircases in the houses for the Governor and chaplain are to be of Parkspring stone, with feather-edged steps rebated and back-jointed, and rubbed (with moulded nosings, and returns from the ground to the first floor); 7-inch landings throughout on the several stories joggled and run with lead, the steps and landings cut and pinned into the walls with cement.

Form the *kerbs* to the external areas to the ventilating shafts with *Parkspring stone*, 9 inches × 6 inches, worked, double plugged and run with lead.

Similar kerbs are to be provided and fixed to the areas of the houses for the Governor and Chaplain.

Principal Staircase to Prison.—Parkspring moulded steps and landings cut and pinned into the wall with cement, with Portland stone dado, capping, pedestal, and plinths. 1¼-inch Portland stone plinth, raking on steps 10 inches deep, chamfered and bedded solid with Portland cement.

York Stone.—Provide and fix 3-inch tooled Yorkshire stone 16 inches wide, to receive the iron roofing over the ventilating tower properly wrought and sunk, cramped and run with lead; cut all mortices for the iron bearers and run the same with lead.

Pave the several areas round the gaol, as shown on the plan, with 3-inch tooled York paving in large stones bedded in mortar and pointed with cement. Provide and fix at the edge 3-inch channel stones 9 inches wide properly sunk out, the paving to be 6 feet wide from the face of the building, exclusive of channel stones. Under the whole, a bed of concrete is to be laid 12 inches deep. Similar paving and concrete is to be laid under all the covered ways to the wing buildings.

Landings.—Provide and fix tooled York 4-inch landings to carry the upper part of the ventilating tower as shown on the drawing, the joints joggled and run with lead.

Tooled York solid *steps* and 4-inch landing leading down to the level of B wing in the basement, and tooled York *steps* to the slope near the engine-house, 3-inch tooled York paving as coping, and jointed in cement for tailing down the parapets of centre building.

FRONT HOUSES.

Pave the whole of the basement story of the houses for the Governor and chaplain with 2½-inch rubbed York on pinning walls, and laid in courses with large stones, square jointed and bedded and pointed with cement; 2½-inch tooled York paving in areas; 3-inch York channel stones 9 inches wide, the whole laid on a concrete 12 inches thick; tooled, solid, rubbed York steps, and 7-inch landings to back entrances.

Sinks.—Provide and securely fix in each scullery an 8-inch rubbed York sink, with rounded corners on 3-inch York bearers and ledges.

Portland steps and landings to the front entrances with Caen stone dados, plinths, cappings, and pedestal, as shown on the drawings.

6-inch *York templates* under iron girders in chapel and entrance hall, principal staircase and visiting places, and 3-inch York templates under all other girders, and where shown on the drawings. 3-inch York covering over girders to furnace-room and to the recesses in chapel, and 6-inch ditto on double girders in entrance hall and on the brestsummer under the angle rooms between E and F wings, also on the girders to the visiting places. 6-inch York bases tooled top and edges under iron columns of covered way between E and F wings.

Provide No. 16 6-inch York *templates* under girders to tanks over centre building; 3-inch tooled York paving to set off inside tower, and to back of parapets over front entrance.

3-inch self-faced York covering to vacuum in piers each side of entrance porch; 3-inch tooled York covering to the front wall; 3-inch rubbed York paving in front of the doorway on concrete 12 inches thick, and 6-inch rubbed York landing in the doorway.

Portland moulded corbels are to be provided and fixed to receive the moulded ribs of the chapel roof and under the iron girders over the recesses in the chapel as per drawing.

CENTRE BUILDING.

BASEMENT.

Chimney-pieces.—Plain Portland box chimney-pieces in the porter's room, steward's rooms, examining-room, and officers' mess-room in wing building, rubbed York slabs 2 feet wide, back hearths 14 inches wide, properly bedded on lime core.

GROUND STORY.

A black marble chimney-piece in the Aldermen's room value, exclusive of fixing, 8*l.* Vein marble chimney-pieces in the Governor's and Deputy-Governor's rooms, each of the value of 6*l.* exclusive of fixing. Plain Portland box chimney-pieces in the Physician's room and waiting-room, solicitor's, and waiting-room, Governor's clerks' and waiting-rooms. The whole to have rubbed York slabs and back hearths as before mentioned.

2-inch Portland mantels and jambs, 12 inches wide, to kitchen chimney, and 2-inch deal shelf and cantilever brackets.

The several rooms on the one, two, and three-pair stories of the centre building, are to have plain Portland box chimney-pieces with rubbed York slabs and hearths.

FRONT HOUSES.

In each house for the Governor and chaplain, provide and fix on the three-pair story a plain Portland box chimney-piece of the value of 40*s.* with 1-inch Portland slab 21 inches wide, and rubbed York back hearth. On the two-pair story, 3 Gothic moulded vein marble chimney-pieces value 3*l.* each, with vein marble slab 21 inches wide, and rubbed York back hearth. On the one pair three vein-marble Gothic moulded chimney-pieces value 4*l.* each, with vein-marble slabs and back hearths.

On the ground floor, black and gold marble chimney-piece in the dining-rooms, value 15*l.* each; statuary marble in the drawing-rooms, value 20*l.* each; black marble in the libraries, value 9*l.* each; the whole of the before-mentioned prices exclusive of fixing, which is to be done in the most workmanlike manner with all requisite cramps and cement.

All chimney-pieces on the ground-floor to have vein marble *slabs* 2 feet wide, and rubbed York back *hearths* fixed and bedded on lime core. In the basement, 1½-inch rubbed Portland *mantel* 15 inches wide, jambs 12 inches wide, the mantel haunched, and the whole fixed with cramps, &c., complete.

The paving in the basement to be continued in the fire-places.

The following is collected from various parts of the specification.

Covered Way.—The floor of covered way from steward's office to kitchen to be of 3-inch York on concrete, 6-inch York templates under iron roofing.

The *urinals* shown on the plans are to be formed with 1¼-inch rubbed both sides, slate divisions with rounded edges, 3¼-inch backs fair on one side, slate bottoms and fronts fair on two sides with zinc tongues, double grooves, and white lead.

6-inch York templates to roof of covered way between F and D wings.

FRONT HOUSES, INTERNALLY.

THREE-PAIR STORY.

Chimney-pieces.—Provide and fix in each house a plain Portland box chimney-piece value 40*s.*, with 1-inch Portland slab 21 inches wide, and rubbed York back hearth.

TWO-PAIR STORY.

Provide and fix No. 3 Gothic moulded vein-marble box chimney-pieces, value 3*l.* each, vein-marble slabs 21 inches wide, and rubbed York back hearths.

ONE-PAIR STORY.

Similar chimney-pieces, value 4*l.* each, and similar slabs and back hearths.

GROUND FLOOR.

Provide and fix in the dining-rooms black and gold marble chimney-pieces value 15*l.* each; in the drawing-rooms, statuary marble chimney-pieces, value 20*l.* each.

In the library, black marble chimney-pieces value 9*l.* each; all the chimney-pieces, except where otherwise described, are to have vein marble slabs 2 feet wide, and rubbed York back hearths.

BASEMENT.

1½-inch rubbed Portland mantels 15 inches wide, jambs 12 inches wide, haunched mantel cramped.

Stairs.—From basement to ground-floor of solid York rubbed all round, securely pinned in and rebated and back-jointed, wrought-iron newels 2 inches square, balusters 1 inch × ⅝ inch, core 1 inch × ½ inch, wainscot moulded handrail, grooved for iron core with mitred and moulded caps, run with lead. Cut holes for balusters.

Principal Stairs.—Of *Parkspring stone,* solid feather-edged steps rebated and back-jointed, moulded nosings and returns from ground to first floor, 7-inch landings joggled and run with lead; steps and landings cut and pinned into the walls with cement.

PORTER'S LODGE.

Steps of Parkspring stone, 12 inches × 7 inches, as described to other external doorways.

No. Two 6-inch rubbed York *sinks* on 3-inch tooled York bearers, 3-inch brass bell traps and grates, 1½-inch lead wastes made good into drains.

Chimney-pieces.—No. Six 1-inch Portland mantels and jambs 6 inches wide, shelves 7 inches wide, slabs 2 feet wide, 1½-inch rubbed York back hearths; kitchen fire-place to have 2-inch rubbed York mantel, and jambs 10 inches wide; 1½-inch deal shelf with cut brackets.

Provide and fix granite *spurstones* to gateway entrance 18 inches square, 3 feet 8 inches long, as per drawing.

Granite steps for centres to gates 3 feet 3 inches long, 19½ inches wide, 10 inches deep.

Caen stone moulded corbels 15 inches high, and 4½ inches ditto fixed at foot of ribs.

Pump-house.—*Stone sills* of 3-inch Parkspring to windows 11 inches wide, weathered and throated, and grooved for iron louvres. Parkspring stone steps to doorways 14 inches × 7 inches.

A *stone urinal* 21 inches × 12 inches, and 7 inches thick, with hole in centre.

3-inch tooled York bearers to division walls, tooled both edges and fixed, only in division walls.

The *sinks* in the centre building are to be 7-inch rubbed York 7 feet 6 inches × 2 feet 6 inches, and 3-inch York bearers. In A and B the sinks are to be of a similar description, 5 feet by 2 feet.

Bases of 6-inch York to iron frame in shaft.

Sills of 3-inch York under iron window-frames of Governor and Deputy-Governor's rooms and large corridor windows.

Templates of 3-inch York under girders to roof of staircases in towers.

SLATE MASON.

Louvres of 1-inch slate self-faced with sawn edges fixed with 2 inch copper screws.

Arrowlets.—¾-inch slate planed one side to arrowlets.

Landings of 1¼-inch Delabole *slate*, planed both sides, finished full inch, bedded and jointed with red-lead cement on iron bearers in slabs averaging 2 feet 10 inches × 3 feet 1½-inches.

Fill in to the several doorways with the same description of slate planed one side, bedded on brickwork in Roman cement.

CENTRAL HALL.

Landings of 4-inch Parkspring to the central hall, rubbed both sides, the joints joggled and run with lead.

4-inch tooled York landing stones under iron columns that support spiral stairs.

4-inch York landings under iron stairs in wings morticed and back jointed.

PLUMBER.

Services.—Provide and lay on a 1¼-inch lead service from the porter's lodge to the upper cisterns in the Governor's and chaplain's houses, with ¾-inch branch services to the cisterns, with ball-cocks, &c., and 1¼-inch stop-cocks in basement.

Flashings of 5-lb. lead to all iron skylights.

All *deal gutters* throughout the several buildings, also the deal flats, to be laid with 7-lb. lead, with 5-lb. flashings, and cast-iron down pipes connected with the drains, 5-lb. lead hips and ridges, secured with bale tacks.

FRONT HOUSES, INTERNALLY.

The *three cisterns* in each house to have 10-lb. lead bottoms, 7-lb. sides with solid joints, and copper nailed edges.

The *sinks* to be lined in the upper story with 10-lb. lead in a similar manner.

Water-closets to be provided and fixed (No. 2) with best water-closet apparatus, copper pans, brass sunk handles, copper wires, brass cranks, &c., complete D traps, and service boxes, 4-inch soil pipes made of 8-lb. lead, 6-lb. lead safes under seats, with inch wastes from them into the soil pipes, 2-inch wastes from cisterns, with washers and wastes, 10 feet of inch service to each pan.

Sinks to be supplied with ½-inch pipes, brass bib cocks and screw bottoms, inch wastes from sinks into traps of closets, 4-inch brass bell traps and gratings.

Stoneware glazed basins and traps to water-closets in basements, with stool cocks, and inch stop-cocks and joints; ¾-inch service from cistern to closet.

¾-inch *service* from cisterns to sinks and scullery, bib cocks with screw bottoms and screw bosses, 2-inch wastes, with brass bell-traps, and gratings into drains.

¾-inch service from cistern to kitchen range and copper, with bib cocks, screw bottoms, and screw bosses.

The chapel is to have on the roof 6-lb. lead ridges, and 5-lb. flashings, 6-lb. valleys and cheeks of dormers, 7-lb. gutters.

Pump-house.—10-lb. lead bottom to cistern, and 7-lb. sides.

Porter's Lodge.—10-lb. lead bottom to cistern, and 7-lb. sides.

Entrance Building, &c.—Bell traps and brass grates, with 1½-inch lead waste to all stone sinks.

No. 2 *water-closets* on the two-pair story, and 1 in the basement in addition to those before described, with 1½-inch ploughed, and tongued, and dovetailed cisterns, with 10-lb. lead bottom, 7-lb. sides, 1¼-inch clean deal seat and riser, and clamped flap and beaded frame, 2½-inch brass butts, and narrow skirtings.

4-inch *soil pipes* of 7-lb. lead to the water-closets.

PAINTER.

Knot, prime, and *paint* 4 times in oil, inside and out, the whole of the wood, iron and other work usually painted. The work internally on the ground-floor to be *flatted* a tint, including all stucco work in the dining-rooms and libraries.

The joiner's work in the dining-rooms and libraries to be *extra grained* in imitation of wainscot, and twice varnished.

The whole of the walls of the entrance hall and staircase to be painted 4 *times* in oil, and extra *vein marbled*, and twice varnished.

Basement, 4 oils, common colour.

Extra grain, in imitation of wainscot, all doors next the hall and staircase on the ground-floor, and the sash and door under stairs. Externally the doors and sashes to be extra grained wainscot and twice varnished.

CHAPEL.

The ribs and mouldings to be *extra grained* in imitation of wainscot, and twice varnished.

GAOL.

All wood, iron and other work usually painted throughout the several buildings of the gaol, both internally and externally, to be painted 4 times in oil.

All iron castings to be painted 2 oils before fixing ; also all soil and other pipes built in the walls.

The gallery fronts, pulpit, doors and moulded ribs of the chapel to be extra grained wainscot, and twice varnished.

PAPER-HANGER.

Properly size and line the walls in the drawing-rooms and rooms on the first floor with elephant paper, and slip the angles.

Paper the drawing-rooms with paper-hanging, of the value of 1*s*. 6*d*. per yard, exclusive of hanging, cut close.

The walls of the rooms on the first floor with 9*d*. paper, and the upper floors with 6*d*. paper ; the patterns of the whole to be chosen, hung in a careful manner, and the joints rolled.

SLATER.

All slated roofs to have duchess slating, copper nailed, effectually to exclude the wet in every part.

GLAZIER.

The *skylights* over corridors and entrance building to be glazed with rough plate glass, $\frac{3}{8}$-inch thick, the squares in one length.

The *skylight* over entrance porch to have similar glass ground on one side, 3 squares in the length of each compartment.

The *sashes* to offices, ground-floor entrance building, physician, medical officer, chaplain's rooms, waiting-room, and other windows in towers to be glazed with 21-oz. best sheet glass.

The *sashes* to steward's offices, porter's rooms, master and matron's ditto, to be glazed with 16-oz. best sheet glass.

Glaze the covered way next the kitchen, as shown on the drawings.

Seconds crown glass to windows of porter's-lodge, basements of Governor's and Chaplain's houses, officers' mess-room, cleaning and sleeping-rooms; best crown to windows of Governor and Deputy-Governor's rooms next corridor.

16-oz. corrugated glass to all cell-windows, work-rooms, infirmaries, kitchen, stores, corridors, and other rooms not otherwise described.

The windows to Governor and Chaplain's houses above basement to be glazed with Chance's patent plate glass.

Corrugated glass to pump-house.

Work.—The whole of the glass to be neatly cut to the rebates, and securely fixed with white-lead putty; the squares to skylight over entrance porch to have lead laps made perfectly water-tight, and to be left sound and clean at the completion of the works.

Lenses.—Provide and fix 4 squares rough plate glass, ½-inch thick, 4 feet × 3 feet 6 inches in iron kerbs, to light basement of central hall.

PLASTERER.

CENTRE BUILDING.

The entrance hall, arches, and walls, and the passages and corridors in the basement, to be rendered and floted in the best manner with patent Portland cement, with flush bead skirtings. Also the Steward's rooms, Porter's rooms, water-closets, and examining-room.

The walls and arches of the fumigating-room, reception-cells, and furnace-room, to be limewhited twice.

The walls and arches of the lobbies between the centre and wings to be rendered and floted with patent Portland cement.

Bracket out the iron girder of vestibule, lath same, and form Portland cement soffit and fascia, with moulded block ornaments as per drawing. *Keen's cement plinth* to entrance hall, with mouldings 3 inches girth.

Ground-floor.—All brick walls and brick and tile ceilings to the entrance hall, passages, lobbies, water-closets, washing-rooms, staircases, corridors under chapel, and the visiting-places, to be rendered and floted with patent Portland cement, and form flush bead skirtings.

All timber ceilings to be lathed, plastered, floted, set and whitened, and the brick and tile arches and walls not covered with cement are to be rendered with plaster, floted and set, and the walls finished with trowelled stucco.

FRONT HOUSES.

Three-pair, two-pair and one-pair stories, lath, plaster, flote, and set the walls, and render, flote and set the walls.

Moulded cornices on one pair to girth 15 inches, and all requisite mitres.

Ground-floor.—Lath, plaster, flote and set all ceilings, render, flote, and set all the walls except the dining-rooms, libraries, passages, and halls, which are to be finished with trowelled stucco.

Render, flote, and finish with trowelled stucco the whole of the walls of the staircases, lobbies, and water-closets from the ground-floor upwards; run double quirk flush beads to the stucco work throughout, except where otherwise described.

Cornices on Ground-floor.—In the libraries form a plaster cornice 26 inches girth, with 3 enrichments 3 inches girth, and centre flower 30 inches diameter, and all requisite bracketing.

In the drawing-room and dining-room, as last.

In the staircase and entrance halls, run a cornice 15 inches girth from the ground-floor, and finish on the two pair.

In the entrance halls form trowelled stucco, enriched soffits, with Gothic moulded corbels.

Basement.—Lath, plaster, flote, and set the ceilings and passages and render, flote, set and colour the walls to within 6 feet of the floor.

Render with Parker's cement the whole of the walls in the basement 6 feet high, finished with a bold flush bead, and coloured and jointed.

Twice lime-white all cellars in the basement.

Provide modelling for the enrichments, white the ceilings, except on the ground-floor, where they are to be twice distempered and clearcoled, and the enrichments picked out.

CENTRAL BUILDING.

One-pair Story.—Lath, plaster, flote, and set the ceilings, and render, flote, and finish with trowelled stucco the walls of Surgeon's room and officers' mess-room.

Chapel.—Lath, plaster, flote, and set and white the ceiling and under the gallery, and render and flote with patent *Portland cement* the whole of the walls. The north end of the chapel to be lathed, plastered, and floted with patent Portland cement. Lath, plaster 2 coats, and set the ceilings and partitions of the rooms under the Prisoners' seats, and twice lime-white the walls not plastered. Lath, plaster 1 coat the quartering, and render 1 coat the brickwork inside the air-flue at north end of chapel, also the space for ventilation under chapel floor.

Two-pair Story.—Lath, plaster, flote, set and white the ceilings, and render, flote and trowel stucco the walls of the Medical Officer's rooms.

Lath, plaster, flote, set, and white the ceilings, and render and flote the walls of the staircases with patent Portland cement, with flush bead strings.

The whole of the walls of the corridors, passages, and arched ceilings to the several wings of the gaol, also the central hall, are to be rendered and floted with patent Portland cement, and flush beads run where requisite, and properly lined and jointed.

The groined ceiling and ribs, &c., of the central hall, are also to be formed with patent Portland cement on lath, and jointed.

The walls and arches in all the cells throughout the gaol are to be twice lime-whited.

Flote inside the whole of the baths with Parker's cement 1 inch thick.

SMITH AND FOUNDER.

The *cast-iron girders and columns* to be provided and fixed, as shown on the several detail drawings.

Cast-iron sashes to cell windows, weight 15 lbs. per foot, wrought-iron horizontal bars outside, with cast-iron sockets at ends.

Cast-iron sashes, weight 11½ lbs. per foot, to corridors, Steward's rooms, Governor's and Deputy-Governor's offices, and Chapel.

No. 63 *copper casements* and fastenings to steward's rooms, Master's and Matron's and clothes' rooms, prime cost 18*s.* each, and fixing.

Cast-iron door and frame to furnace in main shaft, as per drawing, fixed on 6 inch York bases, and a lock value 10*s.*

Wrought-iron shelves in fumigating-room, agreeably to drawing, with cast-iron damper and frame.

Cast-iron moulded frames to windows of corridors, Governor's and Deputy-Governor's rooms, fixed on 3-inch York sills.

Metal span skylights over staircases to centre building.

Provision.—1 ton cast iron in plain girders for roof over staircases, on 3-inch York templates, with wrought and framed kerb, 5 inches × 4 inches.

Cast-iron sashes, 15 lbs. to the foot, to side windows of corridors, officers' mess-room, flour-stores, room opposite dishing-room, and chapel.

8 *wrought-iron rods,* $1\frac{1}{2}$ inch diameter, to ends of corridor, fixed temporary to tie the arches.

Roof of Ventilating Shaft.—Cast-iron bearers, and circular gutter, with bolts, nuts, and screws; 3-inch cast-iron rain-water pipe in shaft.

Cast-iron grating on flat over vestibule, with 3-inch York kerb.

Cast-iron skylight over corridors, as per drawing, and over entrance porch on 3-inch York templates.

Provide the sum of 120*l.* for 2 cast-iron griffins, and fix the same on the pedestals at entrance.

Provision.—In addition to the works described in this specification and the drawings, provide for 30 tons of cast-iron girders and patterns, to be deducted if not directed to be used.

Provide and fix to the front areas of the Governor's and Chaplain's houses *cast-iron ornamental railing,* value 8*s.* per foot run, including mortices and labour fixing.

Wrought iron-railing round back areas, and to steps of back entrances, with $1\frac{1}{2}$-inch half-round top rail, $\frac{3}{4}$-inch square bars, fixed and run with lead.

A similar iron railing to be fixed to the steps and landing leading down to the level of B wing in basement.

Provide and fix all wrought and cast-iron work to the several roofs, agreeably to the drawings; cast-iron coal-plates, &c.

Water-closets and Rain-water Pipes.—Provide and fix stoneware glazed closets with deal covers, 11 inches diameter, with sockets and traps, as per patterns, with red-lead cement joints, secured with $\frac{5}{8}$-inch bolts, nuts, and heads between sockets and traps; Roman-cement joints between pans and sockets, and iron-cement joints between traps and pipes, with cast-iron branch pipes and boxes, iron-cement joints between rain-water pipes and boxes.

4-inch cast-iron flanch pipes for soil, $\frac{3}{8}$-inch metal and rain-water pipes up to roof, at every alternate soil pipe, painted twice in oil.

The *closet pans,* where deal seats are provided, to be $12\frac{1}{2}$ inches diameter.

Cast-iron rain pipes, 3 inches diameter, with heads and shoes to lodge.

4-inch ditto to wings.

5-inch ditto to chapel and entrance building.

2-inch ditto to porch of ditto.

Cast-iron dished gratings, 9 inches square, to the several gullies in 3-inch York kerbs, 2 feet square, cut and rebated for gratings; and all the gratings necessary for the channel stones round the wings.

2 *cast-iron sewer gratings* and frames, each 2 cwt., with 9-inch brick cesspool, 2 feet deep, paved with brick.

Galleries.—Form the galleries round the corridors to the several stories with cast-iron bearers and brackets, 1¼-inch *Delabole slate* landings, planed both sides (finished full inch), bedded and jointed with red-lead cement on iron bearers, in slabs averaging 2 feet 10 inches × 3 feet 1½ inches. Fill in to the several doorways with the same description of slate, planed one side, bedded on brickwork in Roman cement.

Provide and fix the railing with cast-iron standards, handrail, and centre ornament, filled in with wrought-iron bars, with nuts screwed, and run with lead.

The staircases to the galleries to be fitted up in the same manner with cast-iron strings, risers, and bearers for treads, wrought-iron top rails, balusters, and newels; the *spiral staircase* to have wrought-iron core, 1¾ inch diameter, and a wrought-iron string filled in with cast-iron brackets.

Wrought-iron framed gate at foot of spiral stairs with iron-cased, copper-warded lock hung with steel centre and brass sockets 4 inches square at bottom, and steel pivot 1-inch diameter at top, the sockets run with lead.

The whole of the staircases and galleries to be fixed in the most perfect manner and agreeably to the detail drawings.

Cast-iron moulded sashes in doors to entrance hall and passage 11½lbs. to the foot.

Provide 6-inch cast-iron gratings and bell-traps to the several *urinals.*

ASPHALTE, BY THE SEYSSEL COMPANY.

The vaulted roofing is to be covered externally with asphalte ⅝ inch thick, and finished with a gritted surface, the greatest possible care to be taken in making the joints round the several skylights perfectly watertight.

Over the arches of the upper cells and on the concrete described with Builder's work, a surface of fine concrete is to be formed by the Asphalte Company composed of Thames ballast (rejecting all stones that will not pass through a No. 5 sieve), in the proportion of 6 of ballast to 1 of ground lime; spread and hand flote the same over the coarse concrete in sufficient quantity to fill up all the hollow places. This fine concrete to be laid ¾ inch thick; on the same lay the asphalte ⅝ inch in thickness, in layers not more than 3 feet wide, and under each joint provide, sunk in the concrete, an under layer of asphalte 3 inches wide and ½ inch thick.

Fill up with brickwork ½ brick thick, built with asphalte, the space shown next the walls; continue the asphalte before described up the surface thereof to the height shown, and form next all angles asphalte fillets.

The flat surface before described to be laid to a slight fall to throw the water (should any escape from the cisterns or pipes) towards the external walls, and to deliver the same into the rain-water pipes as shall be described.

Tiled Roofs.—All these roofs are to be covered by the Asphalte Company with fine concrete and asphalte precisely in accordance with the above description.

The spaces shown next the parapets are to be also filled in with asphalte and covered therewith, and fillets formed as before mentioned.

The surfaces of the roofs to be laid to a fall to deliver the water into the rain-water pipe heads for which purpose small sunk cesspools are to be formed in the asphalte.

The asphalte is also to be continued through the apertures left for that purpose in the parapets, walls, and a trough or cistern head formed as per sketch, and lined with asphalte, with an aperture at the bottom 4 inches diameter to deliver the water into the down pipes; a 1½-inch lead overflow pipe to project 6 inches, is to be fixed in the cistern head.

Floors.—A surface of fine concrete, as before described, is to be formed on the coarse concrete and covered with asphalte of Seyssel ¾ inch in thickness, and finished with a rubbed surface.

The above description is to apply to the floors of all the cells, corridors, and passages, and the several rooms, lobbies, and other apartments throughout the gaol, where indicated on the drawings.

Provision.—In addition to the works before described, provide 400 yards of ⅝-inch gritted asphalte and fine concrete, to be deducted if not directed to be used.

Form in the whole of the walls of the several buildings the bed of asphalte described in the builder's work, and run the same into the joints of the brickwork, on which it is laid, to half their depth.

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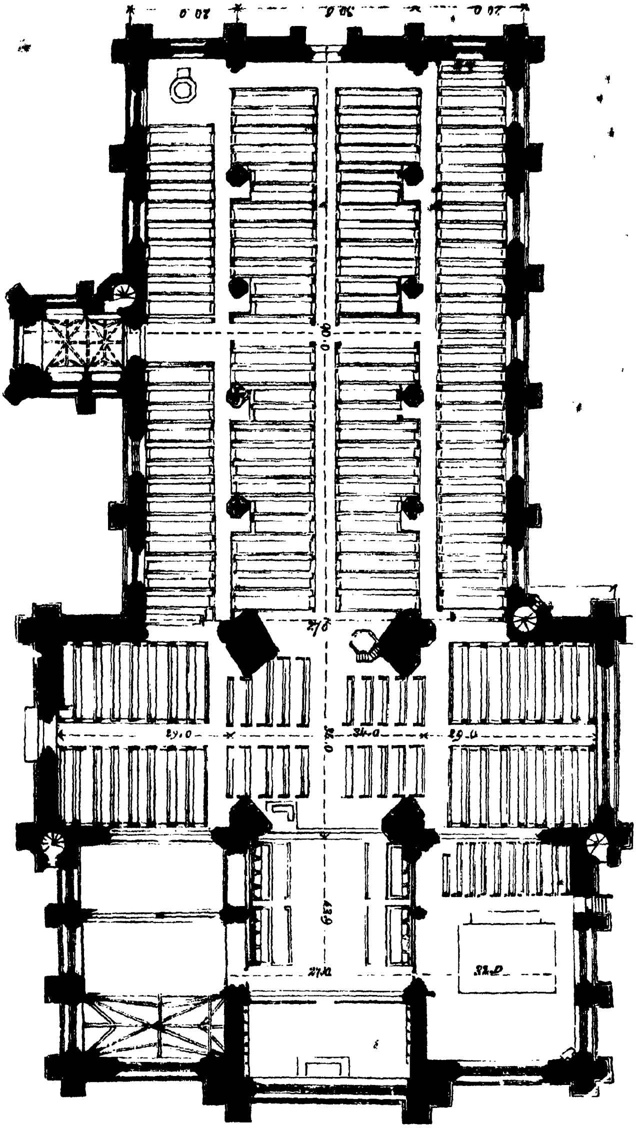


NAWAB SALAR JUNG BAH.

Doncaster Church.

G. G. SCOTT, ARCHITECT.

ROADS AND PATHS.

Lay down granite road paving under lodge in 3-inch courses 10 inches deep on and including a bed of concrete 10 inches deep, similar to road paving on Ludgate Hill.

The yards, east and west, of centre building, the court-yard in front of the same, and the road from the public way up to the porter's lodge to be formed with bushes and burnt clay 18 inches deep, covered with screened pit gravel 6 inches thick, and rolled to a smooth surface; the angles within the dotted lines on the plan not to have bushes laid in.

The paths on each side of the road to be formed with burnt clay 12 inches deep, and garden gravel 4 inches thick, well rolled to a smooth surface.

Lay down burnt clay 8 inches thick, and garden gravel 4 inches thick, rolled to a smooth surface round the infirmary and laundry buildings, and to paths 6 feet wide each side of pump-house.

Specification of Works required for the execution of the Walling and Masonry in the re-erection of ST. GEORGE'S CHURCH, DONCASTER. GEORGE GILBERT SCOTT, *Architect. Completed* 1858.

THE *accompanying drawings* are to be strictly attended to in the performance of the works, as well as such further drawings, descriptions, and directions, as may be given from time to time by the Architect, for the more particular and detailed explanation of different portions of the works; such additional drawings, descriptions, and directions, being in conformity with this specification and accompanying drawings, unless the said additional information be intended to explain any proposed deviations which may be ordered under the conditions and regulations relating to the contract.

The *scale* to which the several drawings are made, is only to be made use of, where no figured dimensions are given; and all such figured dimensions are to be considered correct, though they may not in every instance agree with the scale.

SETTING OUT.

The exact forms and positions of all the walls and other portions of the building to be very carefully set out, subject to the more particular direction of the Architect or Clerk of the Works, carefully correcting any inaccuracies, which may have accidentally arisen in the building of the foundation walls.

No *graves or grave-stones* are to be disturbed, unless it be found absolutely necessary. All grave-stones, however, which might in any degree be injured by remaining in their original position, to be removed and safely kept until the completion of the works, after which they are to be re-fixed or re-laid as nearly as possible in their original positions.

N.B.—The Contractor will be held responsible for all damage, that may happen to the monumental grave-stones in the churchyard, during the period he has possession of it. If it be found necessary to move any bodies, it must be done decently, and they must be re-interred where directed; but on no consideration shall any graves, coffins, or bodies be exposed to public view, nor shall any scaffold-pole, post, &c., for temporary purposes, be fixed in or disturb any grave or vault; but in such cases, strong pieces of timber are to be fixed over the graves or vaults for securing the foot of the scaffold-pole, post, &c.

The *scaffolding* for the tower to be entirely within the tower, except during such time as the roof of the nave is not begun to be fixed.

EXCAVATOR.

The *trenches* of the foundations of the walls and piers will be dug out by the Committee's workmen; and also all trenches for drains, all levelling, filling-in, and ramming, and the stone foundations will also be built by the Committee up to the ground line.

The *old stone* found on the premises to be used by the Contractor in the re-erection, as shall be directed by the Architect. The following descriptions of stones, however, shall not be so used—namely, all vault and grave-stones, and monumental stones, and such ancient architectural remains, as shall be pointed out as especially excepted.

MASON, WALLER, AND BRICKLAYER.

The *walling* generally to be built of large, flat, bedded, walling stone; to be procured from such quarries in the neighbourhood as shall be approved of by the Architect; the old walling stone to be re-used, mixing with it a proper proportion of large, flat, bedded new stone, to be thoroughly well bonded, bedded, and jointed in mortar, and the stones well hammered down to their bearings; the interstices in the body of the walls to be well flushed-up as the work proceeds, with the same sort of mortar as used for bedding and jointing, but to be mixed with one-third fine, clean gravel, well mixed with the mortar before being put into the walls; particular care to be taken in laying and bonding the stones in the best manner for making a strong and substantial wall.

Bands of hoop iron to be built into the walls at such places and in such manner as the Architect may direct, not exceeding 5 tons weight in the whole.

The *walling* throughout the building is to be constructed in the strongest possible manner, every attention to be paid to laying the stone in the strongest way of which it is capable, the walls being in every part bonded together solidly throughout their thickness.

The *mortar* to be made of fresh-burnt Warmsworth lime and clean sharp sand, in the proportion of one of lime to two of sand, to be properly mixed, well beaten and chafed before being used.

Landings under Foundations.—All the foundations of the pillars, piers, and responds of archways to have 6-inch self-faced Wingerworth stone landings laid on the foundations of the said pillars, &c., 3 inches below the floor line.

Old Stone for Internal Ashlar.—The external intermediate facing of the walls to be built of the best stone from Mr. Wrightson's quarry, or such other as shall be approved of by the Architect, in regular courses of ashlar varying from 8 to 12 inches deep, and averaging 8 inches on the bed, to be well bonded into the body of the wall, bedded and jointed in mortar, the surface to be diagonally tooled with the claw-tool.

N.B.—The *internal stonework* of the tower above the lantern to be finely chopped on the face.

Stone relieving arches roughly chopped into form to be built over all doorways, windows, large arches, and all other openings and arches to be the whole thickness of the walls excepting the ashlar facing on both sides, to be 12 inches deep at least; also the spaces between the rims of all arches to be filled up with arches of good rough stone accurately fitted to the openings, and well bedded and flushed in with Portland cement, in the proportion of 1 of cement to 4 of clean sharp sand.

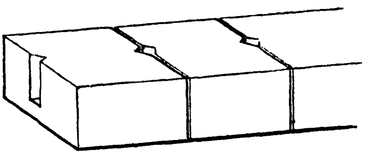
All the *external dressings*, such as the windows, doorways, strings, weatherings, quoins, parapets, pinnacles, canopies, drip-stones, crosses, corbels, and whatever else is distinguished as such by a similar tint on the drawings, to be constructed of the best Steetley or Shireoak stone, or such other as shall be approved of by the Architects.

The *plinths* to be of Mr. Woodyear's stone, all to be accurately wrought to the various forms and dimensions shown by the drawings, and in strict accordance with the circumstances necessarily connected with the proper and substantial completion of every portion. The external surfaces to be dragged or finely claw-tooled, or finished in such manner as the Architect may consider best suited to each portion of the work respectively.

The *ancient original moulded and carved stones* belonging to the tower are to be carefully preserved, for the purpose of being referred to during the preparation of the new window buttresses, with their canopies, cornices, and other features of the tower.

The *quoins* to average 18 inches × 9 inches on the bed, but to be of irregular sizes, in no case less than 14 inches × 7 inches, properly bonded, varying in depth according to the nature of the dressings in connexion with them. The beds of all the quoins to be as nearly perfect rectangles as possible.

Plugging, &c., to Stonework.—The arches of the windows and doorways, tracery and mullions of windows, parapets, copings, cornices, canopies, pinnacles, watertablings, and such like, to be plugged with slate orchard stone plugs let into the stone in the joints and fixed with cement. All vertical joints of parapets and other similar parts to be angularly grooved, and when fixed the grooves to be filled with liquid cement and small pebbles (thus), the grooves not to be cut through to the bottom.



All *pierced parapets* to be plugged.

The *crosses* to be in one stone, and fixed with square copper dowels, 18 inches long and $\frac{3}{4}$ inch square, run with liquid cement. The crosses to be also morticed into the saddle stones.

Stone weatherings to be built in the walls of the tower directly over the roof, also against the clerestory over the aisle roofs, and in every other situation where the roof butts against a vertical wall. The raking weatherings to have horizontal beds and vertical joints.

Bond of Stones.—All the plinths, string courses, cornices, and similar parts to have sufficient bed and bond in the walls, and in no case is the projection to be more than one-half of the bed where practicable.

Cleaning off Stonework.—All the dressings and ashlar and other work to be bedded in good mortar, and to be cleaned down truly at different stages of the work, as may be directed by the Architect.

Natural Bed of Stone.—All stone dressings must be constructed so as, when in work, to be on their natural bed.

All the *internal dressings*, except where otherwise described, to be constructed of stone, of the very best quality, from the Broadsworth quarries—such as dressings to windows and doorways, where the external and internal dressings are not required to be constructed of the same stone. All string courses, cornices, the large arches, the traverse arches to north and south aisles under roofs, and whatever is distinguished as dressings on the drawings, to be worked with a fine claw-tool neatly dragged, or otherwise dressed as directed for the several parts, and set in good mortar: particular care to be taken to preserve the joints from an irregular appearance in consequence of breaking the arrisses of the stones before or after being set.

The *springers*, and the *tower arches*, and all the large *capitals*, to be of Shireoak or Steetley stone.

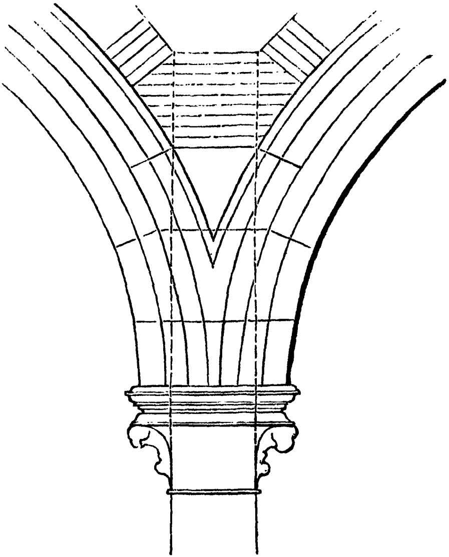
The best of the old stone, such as shall be pointed out by the Architect, may be re-used for these dressings, if found suitable.

The *arcading, &c.*, in eastern part of chancel, to be of the best Stein oakstone.

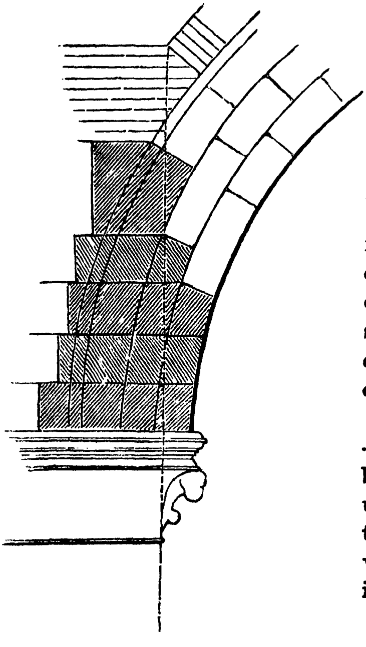
The *pillars* and bases to the tower, also those to nave, transepts, chapel, and chancel, including the responds to the underside of the capitals, are to be constructed of the best grey Huddersfield stone, to be in courses of about 12 inches or 14 inches deep, and in 1 stone for each course to all but the tower piers, which are to be alternately in 4 and 2 stones to a course, and solid all through. The smaller piers to have each a sheet of 7-lb. milled lead laid in the joint, to be well bedded on a layer of strong mortar, and the joints to be raked out ½ inch from the outer arriss all round, and pointed at the completion of the works.

Construction of Arches.—All the arches to be built in rims of moulded stones, as shown on the working drawings; the length of the arch stones to vary from 12 inches to 18 inches in length, to be dowelled together with slate or hard stone dowels fixed in cement, the outer rims to be occasionally bonded together by single arch stones the whole thickness of the arch; all to be well bedded in strong mortar.

Relieving Arch.



Relieving Arch.



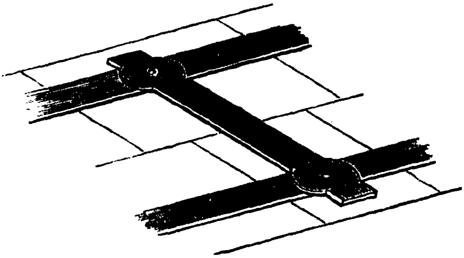
The *springers* of all *arches* to be very carefully constructed of large stones accurately fitted to their respective places.

The principle to be adopted in the construction of the springers to be in all cases as per sketch.

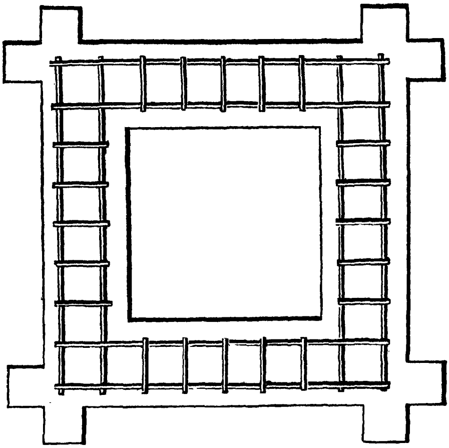
The commencement of the inclined abutments to be in all cases within the vertical line of the shafts, piers, or responds, where no insuperable difficulty presents itself to the contrary.

Discharging Arches to Tower.—Discharging arches to be built over the tower arches, under the lantern windows, the whole thickness of the walls, according to the drawings.

Wrought-iron Bond.—Two

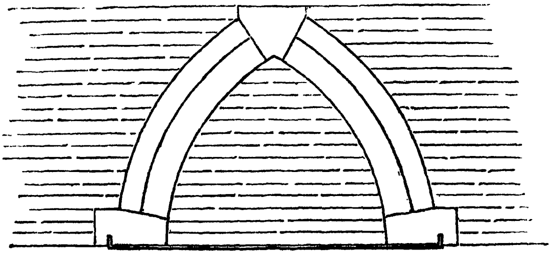


wrought-iron bars, 4 inches × ¾ inch, with cross pieces, to be inserted in the tower wall, all round, immediately above the crown of the tower; archways to be bolted together at the junctions and into the abutment stones for the relieving arches.



The iron ties to be let into the stonework, bedded and covered with cement.

Two other tiers of similar iron ties of the same scantling to be fixed in the tower, where may be directed.



The *groining of the chapel and porch* to be carefully constructed of Steetley stone, according to the drawings. The ashlar between the ribs to be about 5 inches thick; the springers to be in the solid, with all the ribs wrought in them in the solid, agreeably to their respective sections, curvations, and directions.

The *corbels to the bell floor* to be constructed of hard Steetley stone; to have at least 2 feet bed in the walls, and moulded and stopped on the edges.

All *wrought iron* that shall remain exposed to the weather, must previously to being used be heated to a blue heat, and then brushed over with raw linseed oil, and, when dry, be painted 4 times in oil colour, or coated with zinc or copper, as may be required by the Architect.

Strong hooked stones, with centred hooks for door-hinges, to be fixed in the jambs of all doorways; the hooks to have long double fangs let into the stone, and run with lead. The hooks to be prepared with heating and oiling, or zinc or copper, as before described.

The *seats and risers* in the porch to be constructed of stone of the same sort as the porch is built of.

The *steps in the circular staircases* to be constructed of Wingerworth stone, neatly tooled, the newel to be formed in the solid, to have 6 inches bearing on the walls at least. The landings to be the thickness of one step, and all to be plugged together in the newels.

All the *carving* to be done by experienced workmen, to be appointed by the Architect, should he wish it; and models to be first made of whatever so directed by the Architect.

Generally.—The mason and bricklayer to do all kinds of joggling, throating, letting in iron work, and to render all requisite assistance to the other trades; and no material or workmanship whatever to be omitted which is necessarily connected with, or implied in the proper completion of all the works, as described or shown on the drawings or specification.

Conditions on which Tenders will be received for the Roofings, Fittings, Glazing, &c.

THE Tender to state in separate sums—

1. For the South-east Chapel.
2. For the Tower.
3. For the Fittings.
4. For the remainder of the Church.

Also to state the amount of reduction if the nave, chancel, and nave aisles are covered with Westmoreland green slates instead of lead. The slating to include the laths necessary for this purpose. (*See* Note in the margin of specification for particulars.)

Also to state the amount of reduction if all woodwork, excepting the fittings and bell-chamber floor, is made of Baltic red fir instead of oak, as described. (*See* Note in the margin of specification for particulars.)

The builder, whose tender is accepted, will be required to sign a contract in similar terms to that for the masonry (a copy of which may be seen at Doncaster), and to find two securities each for one-third of the amount of tender, who will be required to enter into a bond for that amount, and he himself will be required to give a bond for the remaining one-third.

The drawings and specification to be seen at the Clerk of Works' Office, Doncaster, where builders who have previously obtained permission will have access to them; any additional information respecting the drawings and specification may be obtained on application to the Architect, Mr. George Gilbert Scott, of 20, Spring Gardens, London.

The tenders to be delivered to the Secretary, Henry Whitaker, Esq., Doncaster, endorsed "Tender for Roofing, Fittings, &c., for Doncaster Church," before 10 o'clock on the morning of Saturday, May 5th, 1859.

The Committee do not pledge themselves to accept the lowest, or any tender.

When the tender is accepted, no other step to be taken than the procuring materials for the work.

First Period or Order.—Twelve months to be allowed from the date of the order to commence the works for the preparation and completion of all the roofs, excepting those of the tower and south-east chapel.

Second Period or Order.—Three months to be allowed from the date of the order to commence the works for the preparation and completion of the south-east chapel roof.

Third Period or Order.—Eighteen months to be allowed from the date of the order to commence the works for the preparation and completion of all the fittings, and other portions of the works not included in the 1st, 2nd, and 4th orders.

Fourth Period or Order.—Six months to be allowed from the date of the order being given to commence the works for the completion of the roof, floor, &c., belonging to the tower.

Competitors, who may wish to propose any alteration in the above times of completion, are requested to do so with their tenders.

Money will be advanced to the contractor at the rate of 80 per cent. upon the work actually executed in its place, and 50 per cent. upon materials delivered upon the premises of the Committee.

Specification of Works required in Roofing, Fitting, Glazing, &c., to St. George's Church, Doncaster. GEORGE GILBERT SCOTT, *Architect.*

Concrete.—The whole ground-floor area of the church within the walls to have a layer of good concrete 6 inches thick, laid on well-rammed ground at the proper levels required for the wooden floors, passages, and other spaces.

N.B.—The levelling and ramming of the ground and making the vaults substantial for the support of dwarf walls to be done by the Committee.

CARPENTER.

All the *timber* not otherwise described to be the best English oak, well and sufficiently seasoned, and free from sap, large knots, and other defects.

The *floors* for the fixed seats and vestry to have joists 4 inches × 3 inches, not more than 12 inches apart, to be framed into wrought sills 5 inches × 5 inches, to be rebated for the floor battens. The joists to be laid on sleepers 4 inches × 4 inches, not more than 5 feet apart.

Brickwork for Floors.—The kerbs or wrought sills to the floors to be bedded in mortar on 9-inch brick walls, with proper footings, to be built on the concrete 2 feet below the undersides of the joists, or of such a depth as the Architect may consider sufficient. Brick piers 1 brick square, with proper footings, to be built on the concrete at distances of not more than 3 feet apart for the support of the sleepers. All to be built in good mortar. Many communications for ventilation to be made through and under the floor of the passages between the spaces under the different blocks of seats. (*See* sketch in margin.) The communications to be formed with bricks.

Floor Battens.—The floors of the fixed seats and vestry to be laid with $1\frac{1}{4}$-inch Christiana or Archangel wrought *yellow-deal battens,* to be ploughed and tongued with strong hoop iron, and well nailed with wrought-iron nails to the joist.

All the *roofs* to be framed in the most substantial manner agreeably to the said drawings. The *wall plates* to be in long lengths, the outer or inner plates to be framed together by cross pieces 6 inches × 4 inches at every other rafter; the plates where they join lengthwise to be well scarfed together, and all to be well draw-bored and pinned with riven English oak pins. The *rafters* to be in one piece from the plates to the ridge. The *purlins* to be in long lengths and well scarfed, as described for the plates, where it is found necessary to extend them. The *principal trusses* to be very carefully framed, the curved *braces* accurately scarfed, morticed and tenoned, draw-bored and pinned as before described, and providing and fixing such *ironwork* as is shown or described.

The *bolts and straps* to be made of the best wrought iron. The heads of all the bolts are to be screwed and welded on. All *ironwork*, before it leaves the smith's shop, to be thoroughly heated to a blue heat, and then immediately immersed in raw linseed oil, and when dry to have one coat of good oil paint.

Wrought Work.—The timbers and boarding, wherever exposed to view, must be cleanly and accurately wrought; in other cases they may be sawn only.

Boarding to Roof.—All the roofs, except those of the chancel tower and south aisle of chancel, to be boarded on the back of the rafters with ½-inch matched wrought oak boards 6 inches wide, to be fastened with wrought-iron nails; and the whole of this to be carefully covered with patent asphalte felting, and on this felting deal laths 2 inches × ¾ inch to be nailed up the back of each rafter, and then on these laths inch jointed *red-deal battens* to be securely fixed, the upper side to be roughly dressed and the joinings made even.

The *roof of the chancel* to be panelled on the underside of the rafters as shown, to be ½-inch matched wrought boards 6 inches wide.

Patent asphalte felting to be fixed on the underside of the rafters immediately behind the oak boarding, inch red-deal battens jointed to be fixed on the back of the rafters, as before described.

The *roofs* of the south aisle of chancel and of the tower to be *battened* with inch jointed red-deal battens on the back of the rafters, as before described.

All the *roof gutters* to have oak bearers 3 inches × 3 inches, not more than 12 inches apart, to be laid with 1¼-inch Baltic red-deal battens, with shot edges and wrought on the upper side, to be laid with a fall of 2 inches in 10 feet, and 2-inch drips to be made at every bay. *Cesspools* to be made where required, to be not less than 4 inches deep.

Red-deal rounded rolls 1½-inch diameter, to be fixed on the boarding for the head, at distances of not more than about 2 feet apart. Provide and fix all other fillets that may be necessary to complete the carpenter's work, and all other material necessary to preparing for the plumbers.

The *floor* of ringing chamber in tower to be constructed agreeably to the drawings. The ceiling boards to be of ¾-inch oak battens matched, the joists above the ceiling to be of Baltic red fir, and the floor to be laid with 1½-inch wrought Baltic red deal battens, grooved and tongued with hoop iron. A portion of the ceiling and floor to be made to open when required.

The *floor over porch* groining to have Baltic fir joists 6 inches × 3 inches, 12 inches apart, and the floor laid with 1¼-inch wrought well-seasoned Baltic red battens.

The *bell floor* to be constructed in all respects agreeably to the drawings.

The *beams*, except where otherwise described, to be of well-seasoned English oak.

The *principal supporting girders* to be constructed of the best *wrought-iron plates*, riveted together like boilers, as shown by the details. (*See* sketch in the margin.) The wrought-iron plates and angle pieces to be ⅝ths of an inch thick, properly riveted with 1½-inch bolts; the centre beam to have transverse stiffening plates.

The *floor* to be laid with 2-inch wrought deal battens, grooved and tongued with hoop iron.

A *cistern* to be provided and fixed on this floor to be the length of one side of the tower, to be 3½ feet wide and 2 feet deep inside, to be constructed of 2½-inch wrought deal battens, ploughed and tongued with hoop iron, to be put together with white lead, and have two ½-inch bolts at each end and at each division to connect the sides, and as many bolts to connect the bottom with the sides.

Generally.—All the *Carpenter's work* to be framed and put together in the most substantial manner, and no material or workmanship whatever to be omitted, which is either implied or necessarily connected with the proper completion of all the works.

JOINER.

Materials.—The whole of the joiner's work, except where otherwise described, to be executed with the best dry Riga wainscot oak, or such other well-seasoned oak as may be approved of by the Architect.

The *western folding-doors* and those to the south porch to have English oak framework, 2¼-inch thick, in small panels, and covered with inch-matched English oak narrow boards, ploughed and tongued with iron, nailed to the framework with neat stud-headed nails of wrought iron, to have strong ornamental wrought hinges, the inner and outer hinge to be welded together at the heel, the eyes of the hinges to be accurately turned, to be hung on hooks with turned steel centres, working on a solid top.

All the other doorways to have doors of a similar character, but to have lighter ironwork, and hung single.

Ironmongery.—The three principal doors to have wickets, with proper hinges, latches, and locks.

The *ironwork* to hinges, latches, bolts, and handles, to be of wrought iron according to the drawings.

Locks.—Each door to have a *lock* prime-cost value of 20s., to be approved by the Architect.

The whole of the *seats* to be constructed very carefully according to the drawings. The *seat ends* to be jointed and cross tongued, the groove in no case to pass through the moulding on the upper edge. *Jeffrey's marine glue* to be used for these joints as well as in all cases where glue is required. The ends of chancel and other seats to be tenoned into the sills, and pinned with riven oak pins. The *backs, seats,* and *book boards* to be housed into the ends and fastened with joint screws; the heads of the screws to be covered with oak to match the grain. The *backs* and *fronts* next the passages to have tracery as shown on the drawings.

Screens.—The chancel side archways to have dwarf screens at the back of the seats in the openings of the archways. The *gates* in these screens to be hung with ornamental wrought-iron hinges with ornamental drop handle and latch.

The *altar rail* and *prayer desk* to be made agreeably to the drawings.

All the *carving* to be executed in the best manner by carvers chosen by the Architect.

Generally.—The whole of the *Joiner's work* to be executed in the most substantial manner and with the best materials, and no material or workmanship whatever to be omitted, which is either implied or necessarily connected with the completion of all the works.

PLUMBER.

The whole of the *roofs* to be covered with the best milled lead 7lbs. to the superficial foot, to be laid in sheets connected over the wooden rolls at distances of not more than 2 feet apart. The lead sheets at the rolls to overlap sufficiently to make the roof water-proof, but in no case is the lap to be less than 6 inches.

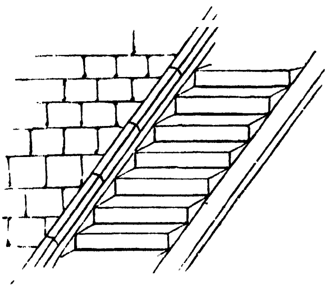
The *gutters* to be laid with milled lead 8lbs. to the superficial foot, to turn up 6 inches against parapets, and 9 inches on the rafters. The sheets to be in one piece from drip to drip, with 6-inch lap at the drips.

The *flashings* to be of milled lead 5lbs. to the superficial foot, and not less than 9 inches wide, to be fastened into the stonework with zinc wedges, and then cemented with Portland cement.

The *cesspools* to have 3½-inch strong leaden pipes connecting them with the stack pipe heads. The cesspools to have perforated *domical roses.*

The *floor of the bell chamber* to be laid with milled lead 7lbs. to the superficial foot, with rolls and flashings, and turn up against the bell frames as described for the roofs. The water to be conveyed from this floor by a strong 3-inch leaden pipe to the ringing floor, and then conducted through the wall on to the north transept roof.

The *cistern* on the bell floor to have the sides lined with milled lead 7lbs. to the superficial foot, and the bottom with lead 8lbs. to the superficial foot; to be all properly and substantially soldered. A 4-inch strong leaden *waste-pipe* to be provided and fixed, connecting this cistern with the pipe through the floor to the roof of the church, and also an inch pipe from the bottom of the cistern, with a tap in the belfry, and a drain or sink into the waste-pipe on the belfry floor.



Steps to be made with the covering of lead and angular blocks of wood, against the sides of the tower, upon the roofs, thus, to enable persons to walk up the steep roofs externally.

Generally.—The Plumber to provide all lead-headed nails, solder, zinc wedges, solder dots and joints, and other materials and labour necessary to complete the whole in the most substantial, neat, and waterproof manner.

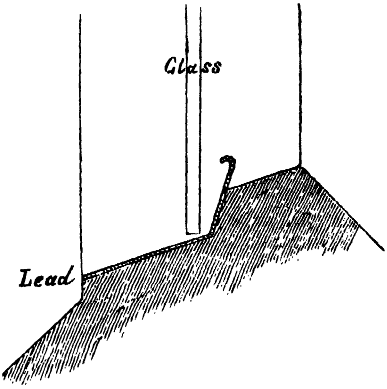
GLAZIER.

The whole of the windows to be glazed with the best *cathedral glass,* 14 oz. to the foot superficial in weight, and be in quarries, about 5 inches × 4 inches.

The *quarry lead* to be narrow and of extra strength in the core, and to be well cemented on both sides; to be tied with strong *copper ties of wire* to the stanchions and bars.

The *bars* to be of wrought iron ⅝-inch square, with a socket in the middle for the stanchion, to be placed at distances of 3 quarries apart, to be carefully let into the stonework, and run with lead. The stanchions to be of wrought iron ⅝-inch square, and have an ornamental wrought-iron termination at the top. The stanchions to be let into the sill at bottom, and run with lead.

Strong *leaden troughs* to be fixed at the bottom of each light, to draw off the water from the interior (*See* sketch.) The lights to be fixed into the grooves of the stonework with oil cement, and made perfectly waterproof.



Twenty *ventilators* to be provided, and fixed where directed; to have pulleys, cords, fasteners, and all appurtenances complete; to be constructed of bronze metal, to swing in a frame made water and weatherproof.

The *glazing* to be all clean and perfect at the completion of the works. The glazing to the south-east chapel to be omitted. All ironwork of windows and spouts to be well zinked.

IRON FOUNDER.

Rain-water Piping.—The water to be brought down from the roofs in strong, cast-iron, rectangular stack pipes, 4 inches × 3 inches diameter, with flanches made according to patterns provided by the Architect, to have cast-iron *shoes*, *bends*, and *angle-pieces*, when required, and be well cemented in the sockets. Each stack pipe to have a *cast-iron head*, of ornamental design, furnished by the Architect; the *gurgoiles* immediately over each head to be contrived to act as overflow pipes to the cistern heads. The water from the roof of tower to be conveyed in the internal angles on one side by 3½-inch cast-iron pipe, and discharge itself into the cistern on the bell floor, and the cistern to have 4-inch pipe down to the belfry floor, and then to turn out on to one of the main roofs.

Lightning conductors to be affixed to each of the 4 principal pinnacles of the tower, to consist of ⅝-inch copper solid rope, with platinum points, to be attached by hooks, to be conducted down the tower, and conveyed to the ground, as shall be directed; the 4 conductors to be joined into 2 in the belfry stage.

The girders for the bell floor, bolts and straps for carpenter's work, to be constructed as described previously.

Proof.—The girders, bolts, straps, &c. to be proved with a sufficient apparatus to sustain without rupture four times the force to which they can ever be subjected.

PAINTER.

The whole of the cast-iron and wrought-iron work, except where directed, twice zinked, to be painted 4 times in good oil colour, twice before it is fixed and twice afterwards.

The fittings to be done as described in the joiner's work.

The bolts and straps and other wrought-iron work to be heated to a blue heat, and then immersed in raw linseed oil before leaving the Smith's shop, and painted immediately.

DRAINER.

Drains to be made from all the rain-water stack pipes, to consist of 4½-inch, 6-inch and 9-inch earthenware glazed *drain pipes*; to provide and lay 150 yards lineal of each dimension. The pipes to be laid in the ground not less than 12 inches below the finished surface, and to fall not less than 2 inches in 10 feet. Elbows and T pieces to be provided and fixed at all junctions; the earth to be well rammed about all the drains.

Paving and Steps.—All the external door-steps and thresholds to be made of solid rubbed Wingeworth or Greenmoor stone of the thicknesses shown; each door-step to be in one piece.

All the steps internally to be of solid rubbed red Mansfield stone, to be in long lengths, the butt joints to be dowelled and run with lead, to be rebated for the tiles.

N.B.—The *tile paving* not to be included.

Contract for the Erection of the NEW CHURCH *at* LLANLLECHID, *Carnarvonshire*, THOMAS HENRY WYATT, *Architect. Erected* 1855-6.

AN agreement made this eighteenth day of July, one thousand eight hundred and fifty-five, between the Rev. Evan Lewis, Clerk, Curate of Llanllechid, in the county of Carnarvon, acting for and in behalf of a Committee of persons (of whom the said Evan Lewis is one), called the Bethesda Church Building Committee, of the one part, and Ebenezer Thomas, of Menai Bridge, in the county of Anglesey, builder, of the other part.

Whereas it is intended to erect a new church at Bethesda, in the parish of Llanllechid aforesaid, according to certain plans, drawings, and specifications prepared by and under the superintendence of Thomas Henry Wyatt, Esquire, Architect, except such works, and subject to such modifications or alterations of the intended works, as are respectively particularly mentioned, described, or referred to in the schedule hereunder written. And whereas the works mentioned in the said schedule as to be omitted, although included in the said plans, drawings, and specifications, are not intended to be executed except upon notice in manner hereinafter provided, and then such works are to be paid for in addition to the contract prices hereinafter mentioned; and whereas certain of the remaining works included in the said plans, drawings, and specifications, and which are to be executed without notice, and to be included in the said contract price, are to be executed subject to the modifications and alterations particularly mentioned in the said schedule, unless notice be given, as hereinafter is provided, that such last-mentioned works are required to be executed in the manner and of the materials described in the said plans, drawings, and specifications, and in that case such last-mentioned works, or so much and so many of them, as shall not have been actually finished, are to be executed without such modifications and alterations, and to be paid for as hereinafter mentioned; and whereas it has been agreed by and between the Committee of persons formed for accomplishing the erection of the said church (being the Committee aforesaid), and the said Ebenezer Thomas, that the said Ebenezer Thomas, his executors or administrators, shall erect the same church on the terms and according to the conditions herein expressed or referred to; now therefore these presents witness, and it is hereby declared and agreed by and between the said parties hereto as follows, that is to say, That the general conditions of contract bearing even date with these presents, and signed by the said parties hereto, are to be taken as forming part of this present agreement, and to be read as if incorporated therewith, except that should anything in such general conditions contained be repugnant to, or at variance with the contents of this present agreement, such agreement shall control and regulate the same general conditions, and the repugnancy or variance contained in the same conditions shall be rejected.

2. That in the construction of these presents the word "Drawings" shall be taken to refer to the 27 drawings bearing even date

herewith, and signed by the said parties hereto, and numbered progressively 1 to 27, both inclusive; and to the supplemental drawings, so dated, and signed and marked No. 1*a*. The word "Specification" shall be taken to refer to the specification containing 16 pages numbered progressively 1 to 16, both inclusive, and which is dated and signed as aforesaid. The word "Architect" shall be understood as meaning the said Thomas Henry Wyatt, or other the Architect for the time being acting for the said Committee. The word "Contractor" shall be understood as meaning the said Ebenezer Thomas while living, and in the event of his death before this present agreement shall have been wholly fulfilled, as comprehending also the executors or administrators of the said Ebenezer Thomas. And the words "Surveyor," "Clerk of the Works," and "Foreman," shall be taken respectively as signifying the Surveyor, Clerk of the Works, and Foreman for the time being; it being intended that persons filling those capacities may from time to time be removed, and other persons appointed in their places respectively.

3. That the Contractor shall, after the signing hereof, with all convenient speed, and in a proper and workmanlike manner, and with the best and most approved materials as mentioned in the specification, proceed with the erection of the said intended church, and of the several works in connexion therewith, named, described, or shown in the specification or drawings (except such works and subject to such modifications or alterations of the intended works as are respectively particularly mentioned, described, or referred to in the schedule hereunder written), and shall and will complete the said intended church according to the specifications and drawings (except and subject as aforesaid), and under the directions of the Architect, so that the same church, with all its adjuncts and appurtenances, may be ready for the performance of divine service on or before the 1st day of October, 1856.

4. That the Contractor shall be paid for the said church, and for the several works in connexion therewith, named, described, or shown in the specifications or drawings (except and subject as aforesaid) the contract price or sum of 3316*l.* 16*s.* 6*d.* Payment of the said sum to be made in portions from time to time, as mentioned in clause No. 17 of the General Conditions.

5. That the Contractor shall keep a just and true account of all articles employed in the building of the said church, or any part thereof, and of the adjuncts and appurtenances thereto, upon which excise or customs duty shall have been paid, or which shall be

liable thereto, and shall at the request of the Architect, from time to time deliver such accounts to him, or to the said Evan Lewis, his executors or administrators, made up and verified, or certified in such way as shall be required by the Commissioners of Her Majesty's Treasury, or other the proper officers or officer in that behalf, so as to enable the said Evan Lewis, his executors or administrators, for the benefit of the said Committee, to receive the proper drawback in respect of such excise or customs duty.

6. That the Contractor shall, at any time during the progress of the works hereby agreed to be done, on notice from the Secretary for the time being of the said Committee, countersigned by the Architect, make and execute in a proper and workmanlike manner, and with the best and most approved materials, as mentioned in the specification, and under the direction of the Architect, all or any of the several works mentioned and set forth in the said schedule, and numbered respectively 1, 4, 5, and 11, and shall on such notice as last aforesaid execute so much of the remaining works included in the said schedule, as shall not have then already been completed in the manner originally designed and intended, and without the modifications or alterations mentioned or expressed in the said schedule. And the Contractor shall be entitled to receive, in respect of such works numbered 1, 4, 5, and 11, as shall be respectively made and executed by him, and in respect of such works as shall be executed in the manner originally designed and intended, and without such modifications or alterations as aforesaid, in pursuance of any such notice as shall be given under the provisions contained in this present clause, the prices set opposite to such works, modifications, or alterations in the said schedule. Payment to be made quarterly as is provided, with respect to the works not included in the said schedule, and upon certificates by the Architect of their completion or progress, such certificates to be made up and delivered as hereinbefore provided.

7. That the Contractor shall for the said sum of 3316*l*. 16*s*. 6*d*. furnish and fix, in addition to the works hereinbefore mentioned or referred to, a reading-desk, and construct a doorway, with door-hinges, lock, and fastenings in the wall of the vestry of the said church; such reading-desk, doorway, and door, to be of the plan dimensions, material, and workmanship to be represented and described in and by working drawings and descriptions to be thereafter furnished by the Architect. As witness the hands of the said parties the day and year first above written.

The Schedule above referred to.

	£	s.	d.
1.—Upper stage of tower and the spire to be omitted			
2.—Reduction of length and width of church, as shown in Drawing No. 27			
3.—Quoins and arches of internal windows (except east window of chancel), to be of brick or stone and plaster, instead of freestone .			
4.—Stone screen across chancel to be omitted .			
5.—Stall seats, &c. in chancel to be omitted .			
6.—Pavement of church to be red, black and buff tiles, laid on concrete, with rough slate flags under, and flags for warm-air flues instead of stone, as specified			
7.—16 yards of encaustic tiles in chancel, at 15*s.* a yard, instead of at 25*s.* per yard .			
8.—Plain glass instead of diapered in chancel windows			
9.—The external face of walls to be of random unsquared rubble work hammer-dressed, instead of being squared at joints . . .			
10.—Altar-rails to be made plain, so as to cost 5*l.* only instead of 20*l.*			
11.—Boarding and ribs to 3 easternmost bays in chancel to be omitted, that portion to be finished like the rest of the chancel . .			

Specification of sundry Works required to be done in Building and Finishing a new CHURCH *about to be erected at* GLANOGWEN, NEAR BANGOR, *in the County of* CARNARVON, *from the Designs and under the Superintendence of* THOMAS H. WYATT, Esq., *Architect. February,* 1855.

QUARRYMAN AND EXCAVATOR.

ALL the *stone* which has been quarried, and is now lying on the site, will become the property of the Contractor, and is to be used, as far as available, for the main walling of the church.

The Contractor will be at liberty to quarry on the spot such additional stone as he may require for this work, and which shall be considered fit for the purpose by the Architect. The quarrying to be done where directed or sanctioned by the Clerk of the Works.

All the *superfluous stone*, chippings, earth, or rubbish, to be removed from the site, and so far levelled that there shall be a clear uniform space of at least 12 inches under the joists, where there are boarded floors. The smaller chippings to be used for forming a foundation for the paving, which is not carried on sleeper-walls.

The *ground to be excavated* or the rock quarried to such a depth, as will admit of the several walls, piers, buttresses, &c., being carried down to a solid foundation, and so that the top course of footings may be 3 inches under the finished level of paths and approaches, as shown by the block plan marked A 1, and on which the general levels are marked.

Fill in and well ram the ground round the several walls, piers, buttresses, as the work is carried up, and level the same on both sides.

The *level of the church* floor to be 2 feet 6 inches above the present level of the ground, where the entrance to the south porch would come, and corresponds in level with the top of the plinth.

Excavate or quarry for such drains as are shown on Plan No. 1, and described hereafter.

Excavate or quarry for the apparatus room, under vestry, and for the staircase to it, as shown on basement plan; the floor of the vault to be 7 feet 6 inches below the floor of vestry.

MASON AND BRICKLAYER.

Lay to a sufficient fall 6-inch *tile or brick drains* (or drains, of similar square area, in stone if cheaper), from the several rain-water pipes, as laid down on Plan No. 1A, or to a similar extent, as may be hereafter determined.

The main body of the *foundations*, *walls*, *piers*, *buttresses*, to be built of the stone on the spot, or of stone of equal quality obtained elsewhere, provided it is dry in its nature and available.

The walls and buttresses to be of the several lengths, heights, and thicknesses shown or figured on the drawings. The whole to be laid in well-beaten mortar, composed of strong lime (stone), well and thoroughly burnt, with sand of good grit and road-drift, in the proportion of one of lime to two of sand and drift. No more mortar is to be made up than is required for the day's consumption, and the whole to be worked to an equal and proper consistency.

No *sea-sand* is, under any circumstances, to be brought on the site, under a penalty of 10*l.* for every load or yard.

The *stones to be laid* to a proper bed, and so bonded as to make thoroughly sound and even work; the whole of the walling to be properly flushed up, and grouted with liquid grout, once in every 2 feet in height.

The outside face of the walling to be laid in square and random courses, the beds and joints being properly squared and laid horizontally and perpendicularly.

The face to be "hammer-dressed," or "poled," and the joints, which are to be neatly formed, pointed with coal-ash mortar.

In carrying up the walls, there must be at least one bond-stone, of good size, carried through the whole thickness of wall in every 6 feet superficial of area or surface.

If the stones from this site will not work and dress in the manner above described, so as to make neat and uniform work, the Contractor will be required to find from some other quarry stone of similar, or nearly similar, colour, sufficient for the external facing.

Discharging arches to be turned the whole thickness of walls (except external facing), over all door and window openings, of the forms shown on the several detail drawings, and over flues.

External discharging arches to be turned over the east and west windows, the south window of tower or baptistry, the north window of chancel, and the eastern window of north chancel aisle, and over the belfry windows; the joints to radiate, the depth to be uniform, and the face to be worked to correspond with the rest of the external facing.

Rough discharging arches to be turned in the common walling stone, over the freestone arches, shown in sections, to chancel arch, arches between chancel and chancel aisles, between aisles of nave and chancel aisles, the arches in tower, and the aisles of arcade between nave and aisles—these arches to be not less than 12 inches thick, and to be carried through the whole thickness of walls.

The sleeper walls may be either of 9-inch brickwork, or of stone 12 inches thick, as may be cheapest—having the top course carefully levelled for the proper bedding of the plate. Leave such openings in these walls as may be directed, for the more effectual passage of the air to ventilate the timbers of floor.

The space between these walls (where shown by a blue tint on foundation plan) to form the warm-air flues. Form a level surface at bottom of ditto, with slate or tiles, and roughly plaster the sides before the paving is put down, so as to afford a readier passage for the warm air.

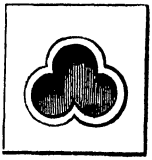
Form a flue from the apparatus room 18 inches × 14 inches, and one from the vestry 9 inches × 14 inches, properly cored, and pargetted, and carried up in one stack, as shown in south and east elevations.

Form an opening in the basement-wall of apparatus room, next chancel or chancel aisle, as may be directed, equal to 6 square feet of area, for the passage of warm air. This opening to be arched over, and with a discharging or inverted arch underneath; the jambs being carried up square and solid.

A similar opening to be formed in the outer wall of apparatus room, for the admission of cold air to apparatus.

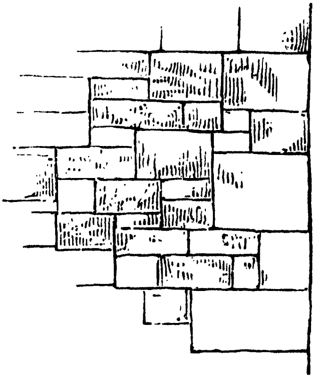
A cesspool, 12 inches square and 12 inches deep, to be formed in the centre of apparatus-room floor, rendered with cement, and covered with an iron grating let into stone rebate, to receive any surface or other drainage, which may work down, the pavement being laid with a fall to the cesspool.

Leave openings for and insert No. — ventilating stones, 7 inches square, 4 inches thick, pierced with a trefoil (as in margin), having galvanized iron or zinc wire guards fixed at back to prevent vermin getting in; and from these stones form brick or stone flues, 6 inches square, carried through the walls, properly cored and pargetted.



The foundation for the font to be carried up solid to the underside of paving, and from the centre of this space provide a 4-inch tile drain, carried through to the outside of church, and communicating with one of the nearest water drains.

The quoin stones to be of any dry, free, working sandstone, as near as may be to the colour of the main body of walling, to be worked in irregularly (as shown in the margin), the joints properly squared. No stone to be less than 4½ inches in thickness, or to return an angle less than 6 inches.



Stone Dressings.—The whole of the door and window jambs, heads, and sills, and mullions, the label mouldings, string courses, buttress caps, and weatherings, hip knobs, crosses, copings, and summer stones, the cornices, and sets off of tower, the trefoil and quatrefoil sinkings in gables, the spire and upper stage of staircase, (turret), the main spire and louvres or dormers, the base mouldings to tower, and the upper plinth course throughout the building and the chimney stack, to be of   Storeton, or some other sandstone of good weather quality, and colour to be approved by the Architect, or of Bath stone of the best quality from the Box or Combdown Quarries, free from clay, or sand holes, air vents, or other flaws. The whole to be carefully worked according to the several detail drawings, to be properly set to its true bed; to be cramped, plugged, and dowelled, where necessary for the same, and workmanlike execution of the work. The whole to be cleaned down and neatly pointed, and all the arrisses left perfect at the completion of the work.

The main spire to be formed of ashlar (of the stone above described), to be 9 inches thick at bottom, diminishing regularly to 6 inches at the top; to be carried up in square though random courses, meeting in a ranging course every 5 or 6 feet in height. The work to be solid from a height of 4 feet 6 inches below the necking of finial of spire. The whole to be cramped with copper cramps properly run with lead, and put together in the soundest manner. The joints to be at right angles with the external face of spire.

Any dowells which may be required for the work are to be of slate, 1 inch square and 3 inches long, no iron ones to be used. The springing course of spire to be at least 12 inches deep and 18 inches wide, or on bed to be of hard stone, and to have a proper skewback worked upon it for the springing of the spire, to be notched out for tension-bars and chain bond, and the stones to be in as long lengths as will work in well cramped together.

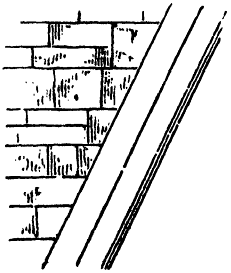
Form in hard stone the corbel arches in angles of tower (as shown in Section No. 7), to carry the 4 octagonal faces of spire, the joints to be carefully worked, and the edges chamfered.

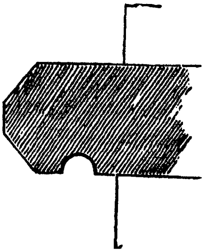
Provide and fix No. 8 face corbels, and 4 angle do. of hard stone, 12 inches, and 9 inches, and 15 inches long; well tailed into walls, and projecting 9 inches, as shown in Section No. 7.

The small spire over staircase turret to be formed as shown with freestone ashlar, 4 inches thick at bottom, and 3 inches thick at top gradually diminishing; the joints rebated, and overlapping. (*See* Drawing No.   .) The springing course to be worked solid at angles, and cramped at joints.

None of the carving, internal or external, is to be included in contract, but stone of a sufficient size and projection is to be left for the carver, and all the moulded work, such as caps to corbels, neckings to finials, &c., is to be done by the Contractor.

In all cases where the roofs of lower portions of building abut against other walls (as the roofs of aisles against clerestory walls, the chancel roof against the eastern wall of nave, the porch against the south aisle wall, nave roof against tower, &c.), a course of freestone weathering is to be introduced in the higher walls, and to tail into the walls at least 4 inches, to follow the line of the roofs, and to be fixed just so much above the line of slates or lead as to admit of cement filleting or pointing being introduced.





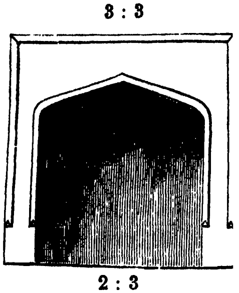
The inside face of the walls of *both porches* to be finished in random stone-walling, as described for external face of walls; so as to avoid the use of plaster.

The copings to be laid immediately over the finished line of slating, allowing space for the cement filleting before described.

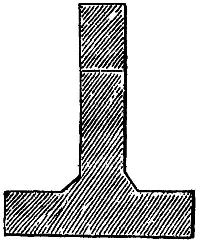
INTERNALLY.

The chancel arch, the arches between chancel and chancel aisles, the arches between nave aisles and chancel aisles, the piers, caps, bases, and arches of the nave arcade, the arches of tower next nave and aisle, the door and window jambs, and arches, and internal quoins and hood moulds, the string courses, corbels, and label mouldings, to be executed in Bath, Caen, or any other freestone of equal quality and colour, subject to the approval of the Architect; to be all worked in the most careful tradesmanlike manner, according to the several detail drawings, and such instructions as may from time to time be given. The stonework to be the best of its kind (if of Bathstone to be from the Box or Combdown Quarries), to be properly set to its true bed, and to be cramped, and plugged, and run with lead where necessary. The whole to be cleaned down and neatly pointed, and all the arrisses left perfect at the termination of the work; for which purpose care must be taken to protect the arrisses and projecting parts by boarding or with mortar.

The jambs of doors, and windows, and piers, to be finished flush with the face of plaster, and to be properly bonded.



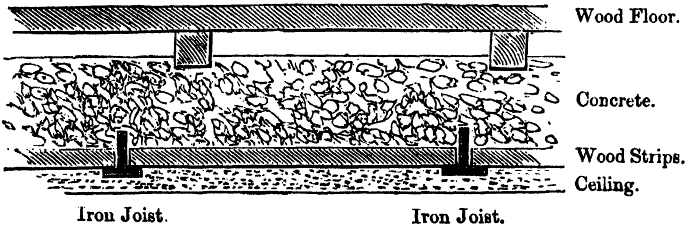
Section of Joists.



Half full size.

Provide and fix a plain stone chimney-piece (or slate) in the vestry, 2 feet 3 inches wide, with proper hearth, and back hearth (as shown in margin).

The floor of the vestry (over apparatus room) to be on Fox and Barrett's patent, with cast-iron joists (as shown in margin) 15 inches apart, on the flanches of which wooden strips about 1 inch square and ½ inch apart are to be laid, on which concrete 6 inches thick is to be laid. A rough ceiling to be formed on underside in 2-coat work; the joists to be laid to a true level, and to lay 9 inches on the wall at each end.



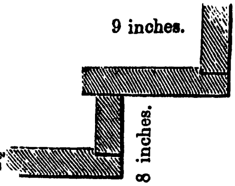
Paving and Steps.—The whole of that portion of the church, tower, porches, and chancel on Plan No. 2, tinted blue, to be paved with local or other paving-stone of uniform colour and hardness; to be not less than 2½ inches thick, laid in square and even courses; that in gangways to be laid on sleeper-walls in 1 stone in width. (*See* Plan of Foundations, No. 1, for the extent of these sleeper-walls, and paving shown by a grey tint.) The rest of the paving in church, tower, porches, and chancel to be laid on *well-rammed* stone chippings, properly levelled; the stones to be properly bedded and jointed in mortar, the upper surface neatly tooled on face. The paving in the porches to be laid to a fall outwards.

Half the apparatus room to be paved with strong self-faced paving pointed in mortar.

The several solid steps to external porches and doorways, the steps at chancel arch and in chancel, as shown on plan and in section, to be of similar colour and quality to the paving; all to be solid; the external steps to be 12 inches × 6 inches, the internal steps 7 inches thick, of the width shown on the drawings. The foot-space round communion-table to be 6 inches × 6 inches. (The inner portion filled in with encaustic tiles.)

The steps in *turret staircase* leading to ringing loft to be 7 inches thick, solid, and tailing 7 inches or 8 inches into walls, and resting on rounded solid newel all the way up, 4 inches diameter formed out of ends of steps.

This staircase is only to be carried up to the level of the ringing floor, 16 feet 6 inches above floor of church. The steps to be roughly tooled on face and riser. Provide and fix such landing on the top as may be necessary to give easy access to the doorway in ringing loft.



The steps to apparatus room to be of paving stone, 2½ inches thick, well tailed into the walls at both ends, and to rest on a stone riser.

Cut all holes in steps or paving which may be required for iron railing or sleepers, and all chases in plinths, &c., required for rain-water pipes. The Contractor to include in his estimate the sum of *25s. a yard* for encaustic tile-paving laid within the communion-railing. The Contractor to include in his estimate the sum of *20l.* for a new stone pulpit, and the sum of *15l.* for a new font, exclusive of the stone base or step shown on plan, which is to be 6 inches thick, and chamfered on edge.

The low stone screen in chancel arch, as shown in section, and in detail Drawing No. 23, to be executed in Bath stone, or such other freestone as may be determined on for the other internal work to finish, 12 inches thick; but the freestone need not be solid, it may have the plain faces of ashlar, 3 inches thick, well bonded into back.

Execute in freestone the 2 blocks shown on west elevation to stop the steps leading to ringing-floor.

Execute all necessary cutting for stay or guard bars in windows, &c. Each party submitting a tender is required to state in his tender, what saving from the total amount of estimate would be effected, if the upper part of the tower and the spire was omitted, the tower stopping short at the weathering or string-course under the belfry windows (at the line marked with a red line A B on Section No. 7), and being covered with a temporary roof, slated over with patent slate hips, as shown in margin.

1½-inch slab slate louvres in belfry windows, as shown in detail drawing, let into rebates or grooves in the stone jambs and mullions, and laid to such an angle and at such distances apart as to prevent the weather driving under. (*See* margin.)

Provide and fix to the eaves of chancel roof and other roofs freestone eaves course, 7 inches × 4 inches, chamfered on edge (as shown in margin), to receive the cast-iron moulded eaves gutter.

CARPENTER AND JOINER.

The whole of the roofs and floors to be framed as shown or described, and of the several scantlings figured (which are to hold full when the work is fixed), with the best Memel, Riga, or Dantzic fir timber, perfectly seasoned, and free from sap, slakes, and large dead knots. The whole of the deals used (except such as are specially excepted) to be from Christiana or Archangel, red, well seasoned, and free from large dead knots, sap, or slakes.

The *timber* used for the seats, ends, divisions, brackets, and bookboards, and for the stall seats, &c., in chancel, and the screens in chancel arches, to be of yellow pine, thoroughly seasoned, and to be selected so as to be as free as possible from knots.

No joist or rafter to be more than 13 inches apart, and in every case to rest on plates 4½ inches × 3 inches at least, properly bedded on walls.

Provide and fix all necessary centring for arches; that to chancel arch and to the two tower archways not to be struck till the last moment, when the work is ready for cleaning down, and until sanctioned by the Architect or Clerk of the Works.

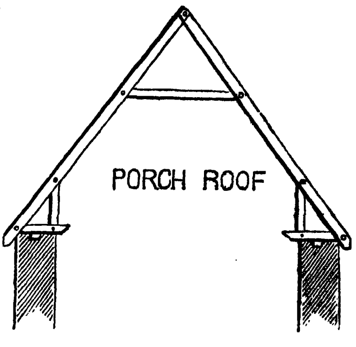
The whole of the roof timbers exposed to view to be roughly wrought 1½-inch deal, gutter-board and bearers; where the roof of nave abuts against the wall of tower, and where the wall of vestry porch abuts against the east wall of south aisle, and where the roof of other porch abuts against the tower buttress, to be 6 inches wide in the narrowest part, and to have a fall equal to 1½ inch in 10 feet, with 2-inch drips where the distance exceeds 10 feet. Form cesspools at the end of these gutters to lead into rain-water pipes in angles.

1¼-inch yellow-deal floors, laid folding under the whole of the seats, and in vestry, as shown by a yellow tint on ground plan, laid on ground joists and sleeper plates as shown on basement plan. The plates to be of oak, 4½ inches × 3 inches, on sleeper-walls and sets off. The joists under seats to be of the scantlings figured on Plan No. 1. The joists or fillets under the floor in vestry to be 2½ inches × 2 inches, with stretching pieces here and there to keep the joists steady. The floors under the seats in nave and aisles to be raised 3 inches above the paving in nave, and 6 inches above that in chancel, as shown in detail drawings. The riser to the seats to be 5 inches × 4½ inches, rebated and chamfered on outer edge, as shown, and to be of oak, the seat ends being morticed into it. At each end of the row of seats, two openings are to be made in this riser (as shown in margin) for the passage of the air and ventilation of timbers.

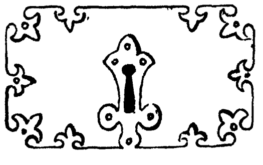
The floor of the ringing-chamber to be of 2-inch elm, or deal, planed on underside and tongued, to be laid on wrought and chamfered binders, 10 inches × 8 inches, as shown in section and on plan.

All plates to be in long lengths and solidly bedded.

The roofs of the two porches to be open framed, as shown in margin; rafters and collars 4½ inches × 4 inches, uprights 4 inches × 3½ inches, plates 6 inches × 4 inches, projecting 2½ inwards, and chamfered on underside.



Doors.—The door leading from porch into church, the door at west end of north aisle, and the two doors opening from chancel or *vestry porch* to be framed of 2-inch deal, as shown on drawings, and covered on the outside with 1-inch flush framed tongued boarding; to be hung by wrought-iron ornamental strap hinges, as shown, to hooks inserted in the jambs for that purpose, and run with lead and tongued at ends. These hooks to be walled in as the work is carried up.



Provide and fix on the first of these doors a strong 12-inch oak Gothic stock-lock with strong key, latch, and twisted rings, with escutcheon plate on outside. The other doors to have 3-inch stock-locks of similar description. The door leading to the ringing-floor to have a similar lock and key, and the whole of these locks to be submitted to the approval of the Architect before fixing.

The door to the ringing-floor to be framed of 1½-inch deal as before described, and covered with 1-inch tongued flushed boarding, to be hung as before described.

The door from the vestry into chancel to be framed as shown on transverse section, 1½ inch thick, and covered next chancel with 1½ inch flush and tongue boarding; to be hung in stone reveal with hook stones and strap hinges as before described, and as shown. Fix on door a Gothic latch and ring, of pattern to be approved.

The doors leading from staircase to ringing-loft, and the door to apparatus room to be 2-inch deal 4 panel doors square, framed, the edges of stiles and rails chamfered on outside, the panels 1 inch thick, hung in fir solid, wrought, rebated, and chamfered door-post and head 5 inches × 4 inches, with one pair 4-inch butts. Fix on each a Norfolk latch and strong stock-lock.

The seats, ends, divisions, and fronts, brackets, bookboards, and capping, for the nave and nave aisles to be of yellow pine, as shown on detail Drawing No. 11, to be framed and put together in a most workmanlike manner, and securely fixed to floors.

The children's seats in chancel aisles to be 1 foot 4 inches above ground. The seats of 1-inch deal, rounded on proper cut brackets about 3 feet 6 inches apart, the seats to be 10 inches wide. Provide and fix open skeleton framing for backs of seats 1 foot high above seat. The whole securely framed together (these seats to be also of pine).

The stall seats in chancel, the reading-desk, and lectern on screen, and the screens behind the stalls, to be of picked pine, framed and finished as shown on the several detail Drawings No. 23.

(The wood carving, as far as it goes, is to be included in contract.)

N.B.—The builders submitting tenders are particularly requested to state what would be the additional cost if all these fittings in chancel were of seasoned English or Baltic oak neatly finished.

The backs and ends of all those seats, which go against the walls, to be rough and coated with pitch before being laid against the walls, so as to prevent decay or dry rot. They should be kept at least 1 of an inch clear of the walls.

The sum of 10*l.* to be allowed in estimate for a new *communion table*, for which drawings will hereafter be given.

The sum of 5*l.* to be included in estimate for moulded oak hand-rail, to be fixed on the iron standards for *communion railing.*

Provide and hang in the two porches 2-inch deal framed wicket gates (as shown in margin, 4 feet high, hung with hook-and-eyes and strap hinges. Fix on each a latch fastening and twisted ring. The gate to the vestry porch to be hung on one, the other to be double.

The roofs over porches, and that portion of the chancel roof over the sacrarium (as shown by a yellow tint on longitudinal section) to be boarded with 1-inch wrought and tongued boarding in narrow widths laid on the back of rafters in the porches, and on the underside of rafters in the chancel.

Provide and fix on the back of all the rafters, strips or fillets $2\frac{1}{2}$ inches × 2 inches (securely nailed), on which the slate laths are to be nailed, so as to keep the plaster or boarding 2 inches clear of the underside of slate. These strips or fillets are not to be put on, till the plasterer has lathed all the ceilings—*i.e.* roofs—and this he will be required to do as soon as the roof timbers are on.

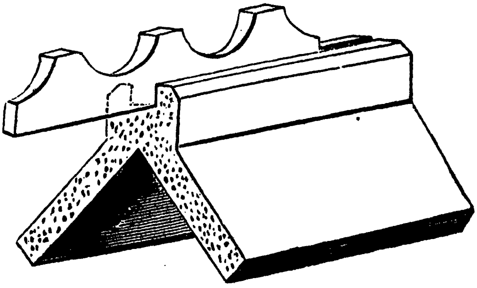
SLATER.

The whole of the roofs to be covered with *green Bangor* duchess slates laid to a fall of sufficient gauge, each slate nailed with 2 copper nails. The slating to be laid over the boarding and over the plaster laths on Baltic fir laths $2\frac{1}{4}$ inches × $\frac{3}{4}$ inch, so as to insure a clear space of $\frac{3}{4}$ inch for circulation of air, and to avoid the effects of condensation.

The roofs of the two porches and the part of chancel roof over to be boarded; the rest of roofs will be plastered between rafters.

Execute all necessary cutting to eaves, valleys, &c., and provide and fix all necessary tilting.

The ridges to be covered with the patent slate ridge, having a 2-inch roll on the top properly secured to ridge piece, and pointed at the joints with slate cement.



The ridge over chancel roof to have a scolloped or ornamental slate ridge-piece let into slate saddle, bedded and pointed with slate cement.

The whole of the slating to be left perfect at the termination of the works.

The louvres shown in belfry windows (Drawing No.) to be ¼-inch slate, 8 inches or 9 inches wide, let into grooves.

PLUMBER.

Lay the several gutters with 7-lb. lead laid to a fall equal to 1½-inch in 10 feet, to be 6 inches wide in the narrowest parts, to turn up 9 inches under slates and 9 inches against walls. 2-inch drips in every 10 feet.

In all cases where the lead in gutters abuts upon walls, 6-lb. lead flashing, 5 inches wide, to be dressed into walls and pointed with cement, turning down over the other lead.

Line the cesspools with 7-lb. lead properly soldered at angle 9 inches deep, and lay 3-inch lead pipe from ditto into rain water-pipe heads.

Provide and fix flashings of 5-lb. lead, 6 inches wide, in all these walls and gables, against which slates abut, properly dressed into walls and under copings and weather course as described in page 199, to be well pointed in Roman or Portland cement, and to turn down over slates 4½ inches.

GLAZIER.

The whole of the windows (except those in chancel) are to be glazed with good flint glass, of a greenish tint, laid in lead quarries of diamond form, not more than 4½ inches wide by a proportionate height (about 6½ inches or 7 inches), and to be effectively secured to a full and sufficient number of guard bars of wrought-iron as far as ½-inch diameter properly let into stonework; the bars to be dipped in tallow when red hot, to assist in preventing corrosion.

The glass to be cemented into the lead *on both sides,* and the body of the glazing to be secured to the saddle bars with copper wire.

The windows in the chancel to be glazed with glass leaded up in an ornamental pattern, which will be delivered to the Contractor, but for which he must include in his tender the sum of 2*s.* 2*d.* per foot superficial, and to be fixed by him with guard bars.

The whole of the glass to be left clean and perfect at the termination of the works.

Provide and fix in 8 of the nave and tower windows, and in 4 of the chancel aisle windows a wrought-iron *hopper* or other form of opening with wrought-iron framework, about 2 feet 6 inches high, by the width between the stonework; to be properly supplied with lines, pulleys, and hooks for the easy working of the same.

The windows in ringing-room and vestry to open as casements in a wrought-iron frame, with proper hinges, and stay bars complete.

Provide and fix to all the windows in nave and chancel and in aisles a small *zinc trough* to receive the condensation from the windows, having a hole pierced through the sill from the gutter to the outside for the escape of moisture.

PLASTERER.

Render, flote, set, and finish rough stucco (not pointed) all the internal walls of nave, aisles, chancel, vestry, and tower, up to the underside of belfry floor, together with the jambs and arches of doors and windows; where stone is not shown through the entire thickness of jamb or reveal, the plaster to be worked flush with the stone quoins and arches.

This work will not be necessarily coloured if the stucco dries of a light or uniform tint, which it is desired should be as near that of the freestone used internally as possible. If, however, the walls do not dry uniformly and of a good colour, the Contractor will be required to colour them throughout of such a tint as shall be approved by the Architect.

Run a Roman or Portland cement skirting 4 inches high, chamfered on top, round all the walls of church, tower, chancel, and vestry.

The walls of the apparatus room and ringing-floor to have the joints struck, and to be twice lime-whitened.

The ceiling of apparatus room to be attached to the lath and concrete of the fire-proof floor above, and to be roughly finished in 2 coat, and whitened.

Lath, plaster, set, and colour the ceilings of nave, aisles, vestry, and chancel (as far as the line of sacrarium where the boarding commences) between the rafters; the ceiling laths being nailed to the back of rafters. (The plasterer will be required to complete the lathing as soon as the roof timbers are on, so that the strips which are nailed to the back of the rafters to receive the slate laths, may be put on at once and the roofs covered in.)

The Contractor to allow the sum of 2*l.* for such extra colouring matter as the Architect may desire to have introduced in the chancel roof. (The porch roofs are boarded.)

SMITH AND FOUNDER.

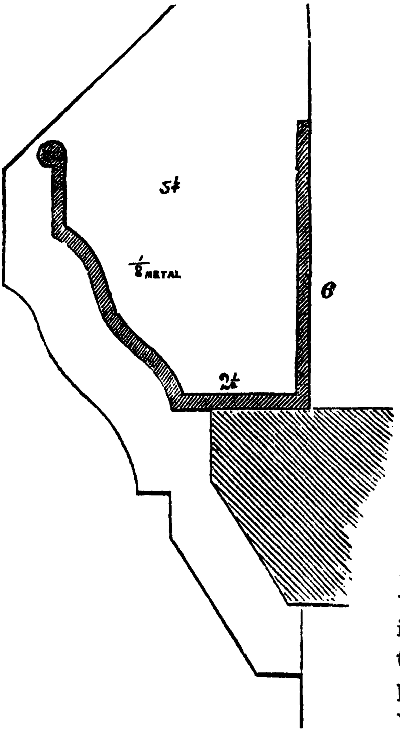
Provide and securely fix a wrought-iron finial and cross to the spire as shown in elevations (and for which detail drawings will be given.) The top of cross to be 5 feet above top of stone finial, and to be carried down a distance of 8 feet below that point (as shown in Section No. 7), where it is to be secured to 2 cross braces or rods of copper secured to ashlar of spire, and from which point the lightning conductor (if there is one) is to be carried down.

The wrought-iron finial to be coated with copper or of solid copper, the cock to be of zinc gilt.

The finial to the staircase turret, and the 4 little finials or crosses over the dormer windows to be of wrought iron as shown in the detail drawing, and to be securely let into the stonework, and run with lead; the finial to turret to be 2 feet 3 inches above stone finial, and 3 feet 6 inches below it; to be 1 inch square.

Provide such wrought-iron bolts, nuts, &c., as may be required, for the proper execution of the roofs to be fixed by the carpenter.

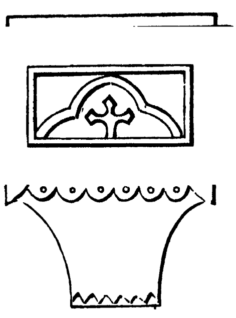
Provide and fix on the stone eaves course, shown in roof drawings, with proper lapping joints 2 inches wide, put together with red lead, and secured with screws. Cast-iron moulded eaves gutter, of the section shown and size in margin; the thickness not to be less than ⅛th of an inch (the red line shows the summer stones and copings), to be laid level, or with a very slight fall; a false bottom, sufficient to



Scale ¼ the full size.

put the water in motion, is to be formed by strips of wood bedded in covered with pitch (average current $\frac{1}{4}$ inch in 10 feet is sufficient).

These eaves gutters are to lead into the 14 cast-iron rain-water pipe heads, shown on the elevations, with such socket pipes as may be necessary to carry off the water effectually. In addition to this number, there will be 3 others required—1 at west end at junction of tower and nave roof; 1 on west side of porch by tower buttress, and 1 at vestry porch.



Inch Scale.

These heads to be similar to the sketch in margin, and to lead into cast-iron rectangular pipes, as shown in margin, with such elbows as may be required for passing the plinths or other projections, and such sockets as will lead the water into funnels of drains. These pipes to be securely fixed to the walls with proper straps, &c.

Provide the wrought-iron hinges required for doors with all necessary leaded nails, to be fixed by carpenter. Provide the necessary wrought-iron hooks and arms, which are to be walled in by the mason as the work proceeds.

Fix over the heads of rain-water pipes and cesspools copper or galvanized wire gratings, to protect the pipes.

Provide and securely fix at the level of springing of spire, and let into hard-stone springer 1 tier of wrought-iron chain bond, $2\frac{1}{2}$ inches × 1 inch, properly jointed at the 8 angles with eyes and pins of proportionate strength. Provide and insert at this level 2 wrought-iron tension bars or rods, crossing each other, $1\frac{1}{4}$ inch diameter, properly turned down and secured to the chain bond.

The sum of 15*l.* to be allowed in the tender for No. 8 wrought-iron standards to carry communion railing, which are to be fixed by the smith in the top step of communion space, and to be run with lead.

PAINTER AND STAINER.

The whole of the roof timbers and the boarding to have 1 coat of size, and then to be *stained* with asphalte, oak stain, or such other stain as may be approved by the Architect.

The whole of the seats and stalls in chancel, the screens in ditto, and the several doors to be sized, and then to have 1 coat of asphalte stain mixed with varnish. The doors to have an extra coat of varnish.

The *stain* is not to be applied until the Architect has seen a pattern, and determined upon the tone and colour.

The whole of the ironwork to have 4 coats of good oil and colour, of a pattern to be approved by the Architect.

The seats to be numbered with 2½ inch letters in red paint.

Specification of the several Works required for the Completion of TWO CHURCHES *to be erected by the* TOWN COUNCIL *of* EDINBURGH *at the Entrance of the New West Approach.* THOMAS HAMILTON, *Architect.* 1831.

DIGGER AND LEVELLER.

The ground to be dug and cleared out to the depth required for the foundations, and the trenches for the walls cut in steps, as explained by the sections, and to be of the proper width and depth to receive the scaresments; the whole to be made perfectly level, both longitudinally and transversely. All digging for drains, cesspools, water-pipes, and every other purpose that may be required, is also to be performed, and all rubbish arising from the operations during the progress of the building to be carted away by the Contractor.

MASON.

Walls of every description to be built of the forms and dimensions severally shown by the drawings: *rubble work* to consist of good sizeable stones, laid on their natural or flat beds, flush, in properly prepared mortar, so as to require as little small packing as possible, and to be of the best workmanship in other respects.

Foundations to spread in the manner shown by the drawings: no stone to measure less than 12 feet superficial, or to be under 10 inches in thickness. The *beds* to be carefully dressed or scabbled, and every stone to be properly squared and neatly fitted to the one adjoining, so as to break bond in the most workmanlike manner. Those walls, where lathing is required, to be levelled at the height of every 2 feet for *bond timbers*, which are to be inserted so as to project half an inch beyond the perpendicular surface of the masonry. *Dwarf walls* to be built, where shown by the plans, and accurately levelled for the sleepers and pavement of passages. Inband and outband ribats of windows, doors, and other openings in thick walls, to be of large well-dressed square stones, built alternately, and laid on their natural beds in a substantial and workmanlike manner, the inbands going two-thirds through their respective walls. *Flues of chimneys,* &c. to be formed with large Hàiles stones, plastered with strong lime, well haired, and otherwise put out of hand in the best manner. Recesses for receiving water-pipes from the roofs, &c., must be formed in the walls where-ever necessary; flues for conducting cold air to furnace-chambers to be built as shown by the plans, or in such other manner as may be directed; discharging arches to be turned over all openings exceeding 2 feet in width.

Construction.—The walls of the *Tower*, the pillars for supporting the same, together with those for supporting the nave walls of the West Church, to be built with the utmost care and accuracy, and to consist entirely of large stones from *Craigleith Quarry,** not less than 10 inches thick, every stone being properly squared, having its beds dressed to a smooth surface, and all exactly fitted to each other; in short, every part of the said Tower must be built solid throughout, of large materials, of the very best quality, and so as to require no small packing whatever, the backing or hearting being laid in courses of headers and stretchers alternately, the headers opposite to the stretchers in front, and in size and thickness suitable thereto; the upper beds of each course are then to be dressed off smooth and even before another course is begun, and at every third course the work must be grouted with thin well-made grout mortar in the most careful manner, in order that the masonry, not only of the exterior, but of the interior of the walls, may be made completely solid, and bound together throughout all its parts.

The *arch-stones of the great tower* to be at least 27 inches deep, and 12 inches thick at the intrados, dressed on their beds with the greatest accuracy, built cross-bond, each course being formed of 2 and 3 stones alternately. No bond or overlap at the beds or joints to be less than 15 inches.

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* It is not indispensable that the whole of the stones should be taken from Craigleith; on the contrary, materials from that quarry will only be insisted on for the pillars and under part of the tower. The materials for the other parts of the building, and even for the tower above the level of the ridge of the church roof, may (with the exceptions afterwards made) be taken from Humbie, or any other quarry of approved quality.

All the other *arches or vaults* throughout the building to be constructed with the same care and accuracy as above described, having arch-stones of sizes requisite and suitable for their respective spans.

Ashlar of the tower not to be less that 12 inches thick on the bed, and the ashlar of the other parts of the building must be at least 9 inches thick; the height of each course to be at least 12 inches, and the length not only of headers but of stretchers not to be less than three times their height; the whole to be of a perfectly uniform colour, free from blemishes or spots of any kind, to be well jointed and laid in putty, headers to have no taper backward, and the work in other respects to be executed in the most unexceptionable manner, every alternate stone of the projecting buttresses, &c., to be tailed at least 15 inches over the joint below or into the wall behind. The whole beds and joints of the ashlar work of parapets, upper parts of pinnacles, and also of the tower, to be set or lipped with at least 2½-inches of oil putty, carefully prepared, and laid so as not to discolour the stone. Farther, the whole masonwork, and especially that of the tower, must be carried up in a regular and uniform manner; so that no part of the building shall be allowed at any time to be more than 2 courses of masonry above another part, without at least permission having been asked and given so to proceed.

The various *copes*, or mouldings forming copes, around the parapets, &c., of the building and tower to be laid so as to form cross bond with the courses immediately underneath, and to be constructed of the largest stones, which the nature of the design will permit; as, unless where absolutely necessary, no single stone will be allowed to be used for such a purpose, which does not contain at least 10 cubic feet after being worked and ready to be laid in its place. The same rule to be observed in regard to the upper termination of pinnacles and the like. Upper surfaces of every description to be weathered, water-jointed, and run with lead, or pointed with mastic, as may be required.

Copings of every kind, as also upper stones of pinnacles, crosses, and finials of every description, to be secured with cast-iron dowells, 5 inches × 2 inches square, or of such other sizes as may be deemed requisite, and accurately set with patent mastic; *mullions* of windows, &c., to be secured at the joints with dowells of old well-seasoned oak boiled in linseed oil, and when neither of these modes may be found applicable, copper cramps are to be furnished by the contractor, and inserted in such manner as may be directed.

The several *fronts* of the building and of the tower, with the various projections and returns thereof, together with their respective buttresses, pinnacles, finials, tabernacles, mouldings with their enrichments, copes, splays, window and door labels, mullions, and tracery of every description, sinkings of panels, &c., to be polished in the best manner, and in other respects finished with the greatest precision, all the details being executed in exact conformity to the accompanying drawings, or to such others as may be hereafter furnished.

The stones forming the corbels, or cornices of projecting battlements, and mouldings of a similar description, to be of the thicknesses shown by the full-sized drawings, and all to have such a wall-hold as to insure a tail weight of at least double, and occasionally triple, the weight of the projecting parts.

The various brackets, cusps, corbels, trefoils, quatrefoils, cinquefoils, finials, and other ornaments, to be all neatly carved, according to such drawings or models as may be furnished during the progress of the work.

Sills of the 4 large windows to be in 2 stones, having their junction at one of the centre mullions. The sills of all the smaller windows to be each in 1 stone. Mullions to be in 1 stone each, and at their junction with the tracery the joints to be dowelled and otherwise secured as may be directed. The upright mullions, transoms, and tracery of windows to be 13 inches × 7 inches, grooved to receive the glass, and otherwise completed in exact conformity with the drawings, or such others as may be furnished; all the beds and joints being set with white lead, carefully dowelled, as before described, and otherwise finished in the most substantial and secure manner. Mullions and tracery of windows may be of the stone used for the other parts of the building, if found perfectly suited to the purpose; but the contractor must lay his account with providing them of the best Craigleith stone, if he should be required to do so. Perpendicular joints of the splays or ingoings of windows, and all places where practicable, to be concealed by arranging them, so as to meet at the internal angles of mouldings and checks.

The *corbel tables* or *projecting parapets* of tower to be formed as shown by the respective drawings, the divisions being checked to receive the panels, the upper parapet being perforated and moulded according to the drawings, and in other respects made as light as may be found proper, in order that as little weight as possible may be thrown beyond the perpendicular of the walls below.

The whole interior of the tower to be neatly scabbled, and otherwise finished in a workmanlike manner.

Steps and plats of stairs leading to galleries to be all polished, of Craigleith stones, with an average wall-hold of 12 inches, and in every respect finished in the most substantial manner. The square plats to be in 1 stone each.

Stair leading to the belfry in tower to be droved. Steps, &c., to have strong wall-hold, and to be otherwise completed in the most substantial manner.

Stairs and staircases (except those leading to furnace-chamber and belfry) to have Hailes stone skirting, built into the walls as the work proceeds. The skirting of the principal lobbies and staircases to be polished, and to project ¾ths of an inch before the plaster.

Pavement.—All the parts tinted blue upon the plans to be laid with well-polished Arbroath or Caithness pavement, at least 3 inches thick, neatly jointed, solidly laid, and otherwise completed in the most workmanlike manner; pavement of passages to be 4 inches thick, and of lengths sufficient to rest upon the dwarf-walls on either side.

Outside steps, plats, &c., to be polished, properly lapped over the steps or plats immediately below them, and laid solid upon rubble walls, and otherwise finished in the most approved manner.

Partitions to be built in the best manner, of hard-burned 6-inch double stock bricks.

Drains to be built in the most sufficient manner, as shown in the drawings, and to be made with such declivities as may be required. The whole to be of *Hailes stone*, with sills not less than 7 inches thick, wrought hollow in the centre, and laid close joint, upon a bed of good rubble, in the most solid manner; sides to be of large stones, neatly dressed, and pointed inside, and the covers to be of Hailes stones, 4 inches thick, hammer-dressed, hard packed at the ends, closely jointed, and of a width sufficient to project over the outer sides of the respective drains.

Cesspools to have hammer-dressed sills, at least 7 inches thick, and the sides built in the most sufficient manner, finished with Roman cement, having proper tongues, &c.; bottoms to be 3 feet below those of the drains, tops to be covered with droved Craigleith pavement, 12 inches longer than the opening of cesspool. Smaller cesspools to be formed at those points where the pipes discharge into the drains, and all made properly water tight.

The *vestry* or *session-room* in each church to be provided with a neat plain polished mantel-piece of Hailes stone, made according to drawings to be furnished, with the necessary nosings and covings. *Hearths* to be 2½ inches thick, of polished Caithness or Arbroath pavement.

A layer of dry *stone shivers*, of a depth not less than 18 inches, to be laid below the level of sleepers of floor; also below the pavement of every part of the building.

An *arched chamber* for heating furnace to be formed below the south staircase of each church. Arches to be of brick 12 inches deep. Stairs leading down to these vaults to be droved, both chambers to be laid with thick-scabbled Craigleith or Hailes flags, closely jointed.

CARPENTER AND JOINER.

Materials.—The whole of the *timber* for the beams, trusses, roofing, joisting, standarding, wall-battens, bond-timbers, wall-plates, safe-lintels, bracketing, outside doors, &c., to be of the best *crown Memel*, and of the various dimensions specified or shown by the drawings; framing of doors, and of bound work of every description to be also of best Memel timber; panels and other parts of the finishing to be of the best *American yellow pine*. *Flooring-deals* to be cut out of *Petersburgh battens*, and the timber for every purpose, without exception, to be of the best quality, free of large knots, shakes, and sapwood, to be all thoroughly *seasoned*, and cut out with as little delay as possible.

Trusses of roofs to be constructed as shown by the drawings; the tie-beams to be 13 inches × 7½ inches; principal rafters 11 inches at bottom, 9 inches at top, and 6½ inches thick; king posts, in two divisions, 7 inches × 5 inches each; straining pieces, 5 inches × 5 inches; all to be strapped and bolted, and the several pieces fitted to each other with the greatest accuracy; common rafters to be 7 inches × by 2½ inches, checked upon and laid transversely to the principal rafters, and at such distances from each other as the sizes of the slates may render requisite. Wall-plates under principal rafters, at the extreme ends of the common rafters under sleepers, and all other places where necessary, to average 7 inches × 2½ inches, laid perfectly solid and level. Joisting of platforms and galleries to be 10 inches × 2½ inches; and for roofs of vestries and landings of stairs, 9 inches × 2½ inches. Joisting of galleries to be in one length, notched upon the truss-beams and the wall-plates; sleepers 7 inches × 2½ inches, and joisting for all other places to be of dimensions suitable to their respective bearings, and in no case to exceed 14 inches apart. Trimmers or bridle-joints to be 3½ inches thick. Ridge-pieces 10½ inches × 2 inches, and rounded for lead. Joisting for supporting the ceilings to be 7 inches × 2 inches, and 2 feet 6 inches apart, checked upon the tie beams, and otherwise made perfectly secure. Ceiling joists generally to be 5 inches × 2 inches, and strongly strapped to the joists above, in such manner as may be directed.

Bracketing, where necessary under the floors, seating, and passages, &c., of galleries, to be 4½ inches × 2½ inches thick, constructed in such manner as may be directed.

Beams for supporting the galleries of both churches to be of the requisite dimensions, finished with mouldings, &c., and placed as shown by the drawings. Those of East Church to be strongly trussed with iron, well strapped and bolted together, and otherwise executed in the best manner; all the other beams about the building to be of a similar construction, 13 inches × 7½ inches, and trussed where so shown by the drawings, with struts averaging 9 inches × 6 inches. Strong iron king posts, bolts, &c.

Standards for partitions to be 4½ inches × 2½ inches. Door standards and lintels to be all 2½ inches thick, and to average 6 inches broad, strongly tenoned together, and well fixed to timber bricks or dooks, those for outer-doors to be fixed with strong iron cramps or batts; door stops not to be less than ¾ inch thick; grounds for finishings of ingoings of doors to be 2½ inches × 2 inches; grounds for wall finishings 2½ inches × 1 inch; timber bricks or dooks 5 inches × 2 inches, to be built at the height of every 20 inches into ingoings, and all places where necessary. *Bond timbers* for wall battens or linings 4½ inches × 1½ inch, to be built into the walls at the height of every 2 feet, and to project ½ inch before the masonry; wall battens to be 1¼ inch × 1 inch, and not more than 13 inches apart; safe lintels, where requisite, to be of the average thickness of 4 inches.

Floors to be of the best red wood battens, not exceeding 6 inches broad, and to be 1¼ inch thick, put together with strong oak dowells, and otherwise finished in the most approved manner. *Boarding* for lead platforms, both of churches and tower, to be 1¼ inch thick, and not more than 7 inches broad, ploughed and tongued. Boarding for pavement 1 inch thick. Gutter boards to be 1½ inch thick, and fitted perfectly solid to the bearers, with a declivity of 1½ inch to 10 feet, or such other slope as may be approved of; drips, where shown by the plans, to be at least 3 inches deep.

Outer doors to be all bound, 3 inches thick, with 1½ inch thick panels, and planted mouldings outside, as shown by the elevations, in 2 leaves each. *Inner doors* to be 2¼ inches thick, each in two leaves, and all the other doors of vestries, &c., 2 inches thick finished; to be all framed with panels ⅞ inch thick, having planted mouldings, as shown by the drawings. Doors to the furnace-chambers, tower, and all similar places, to be of 1¼ inch narrow deal, ploughed, tongued, and beaded at the joints; back bars or clamps 7 inches broad, firmly nailed, and otherwise substantially completed.

The whole framing of the divisions of the *seats* to be 1¼ inch thick when finished, to have ¾-inch thick panels, bead and flush on front, and to have a small moulding upon the other side, worked upon the stiles, &c. The stiles and rails to be 3½ inches and 4 inches broad. Standards or brackets for supporting the seats to be 2½ inches square. The back standards to reach from the floor to the bottom of the book-board, and to have a cross piece for receiving the seat, and another upon the floor into which the uprights are to be morticed. The distance of one standard from another not to exceed 4 feet 6 inches. *Book-boards* 6 inches broad and 1 inch thick, finished with a ⅜-inch bead on the front, and supported with substantial and neat iron brackets, placed as may be directed. *Seats* to be 13 inches broad, and 1¼ inch thick, lined below with ¾-inch deal; pew doors to be 18 inches wide, and, together with the divisions between the doors, to be bound bead and flush towards the seats, and finished with sunk panel and ogee moulding outside; the bottom rails to be 7 inches broad.

Communion seats to be formed by removing each alternate division of the seating, and in other respects completed conformable to the arrangement shown by the plans, or such other arrangement as may hereafter be approved of, the extra tables and seats being furnished by the Contractor; those divisions of communion seats, which are immovable, to have the book-boards, &c., hinged, or otherwise made to suit the purpose intended; where necessary, these divisions are to have the seats made so as to separate from each other, each of their upright standards having two screws, with corresponding iron sockets in the legs of the movable forms, for the purpose of securing them in their places. The *movable forms* also to have screws, with sockets fixed in the floors for receiving them, and to be strengthened by means of rails 5 inches × 1½ inch.

Communion tables, and tables in the square seats, to have tops 1⅛ inch thick, and rails 5 inches × 1½ inch, supported by feet 2¼ inches square, and to have folding leaves where necessary.

The divisions of all the seats to be 3 feet 6 inches high, finished at top with a ¾-inch neatly moulded cope, and the seating of every description to be executed in the most substantial and tradesman-like manner.

The whole of the walls, pillars, and other places in the body and galleries of both churches to be lined to the height of 4 feet

6 inches with ¾-inch beaded *lining*, ploughed and tongued, having no single piece broader than 5 inches, or narrower than 4 inches, the whole being grooved into the floor, and finished at top with a neat 1½-inch moulded cope.

Ingoings of all the doors, or other openings in thick walls, to be finished with 1¼-inch thick bound linings, having ¾-inch panels, and mouldings planted to correspond with the doors; the blank doors in the galleries to be of similar thickness. Doors to be all finished with architraves, or other mouldings, as shown by the drawings.

The *vestries* to be finished with single fascia architraves round the doors and windows, and base mouldings, with 7-inch plinths ¾ inch thick, grooved into the floors.

The *water-closets* to be neatly fitted up with mahogany seats, risers, and bound flaps 1¼ inch thick, to be lined to the height of 4½ feet with narrow deal, ploughed, tongued, and beaded, and finished with a neat coping at top; a cistern of 1⅝ inch wood to be furnished to each closet, 3 feet 6 inches long, 2 feet 6 inches wide, and 2 feet 6 inches deep, or of such other dimensions as may hold an equal quantity of water. All the passages and closets about the vestries to have ¾-inch *skirting*, and the closets to have each 3 shelves of ¼ inch wood, supported with proper bracketing.

Borrowed light of the vestry of East Church to be 2½ inches thick, made according to drawing, and to have a ventilator of a proper construction. The linings of the *fronts of the galleries* to be 1¼ inch thick, to be finished in the neatest manner, with mouldings planted as shown by the various sections and drawings thereof. Framing of fronts to be lined inside with ⅝-inch narrow deal, ploughed and tongued; to be all supported by means of standards, 3 inches × 2 inches, firmly secured to the trussing of the beams and top-rails; the whole fronts and continuations thereof to have planted mouldings, rails, &c., as shown by the drawings; to be executed in all their parts with the greatest neatness, and of extremely well-seasoned timber. Soffits, &c., of beams under the fronts of the galleries to be finished in the neatest manner with ⅝-inch deal, and the spaces between the front beams to be formed into panels, according to the drawings or directions afterwards to be given.

Lathing to all the ceilings and outside walls, ingoings of windows, &c., where shown by the plans, to be lathed with the best Baltic split lath, not exceeding 1¼ inch in breadth, nor less than $\frac{3}{16}$ths of an inch thick, having the joinings broken at every 16 or 18 inches. All projections from the walls, pillars, and arches, to be formed for the reception of the plaster mouldings, by means of iron spikes not farther distant than 13 inches properly twined with rope yarn, or with lath and brackets, as circumstances may require. The lath battens upon the principal pillars or arches to be fixed with iron holdfasts at proper distances. Copes for the *handrails* of stairs, also for platforms behind the pulpits, to be of the best oak or wainscot, neatly finished. The *stairs* from the vestries to the pulpits to have handrails, fixed with proper holdfasts, &c. Hatchways, leading out to the roof of each of the staircases, to be formed of $\frac{3}{4}$-inch wood with strong *framing*, having 7-lb. lead round the edges, and made otherwise complete.

Line the ends of joisting and other parts of the galleries towards the windows with $\frac{5}{8}$-inch deal, and all the inner sills of the windows to be formed of $1\frac{1}{4}$-inch deal, finished in the best manner. Those parts of the back seats in the galleries, which are opposite windows, to be made moveable, in order that, when necessary, the repairing of the windows may be easily accomplished. Floors and landings to be formed at the several heights in the tower or spire as shown; the floors to be $1\frac{1}{4}$ inch thick, square joined, and well nailed to the joisting.

The *pulpits*, with their canopies, *precentors' desks*, and all the external finishings connected therewith, to be of the best well-seasoned *wainscot*, finished in all their details according to the drawings. The *mouldings* to be worked with the most perfect accuracy, and the ornaments carved of oak in the best manner. Each *canopy* to be supported by 4 oak pillars, in the cores of two of which, strong iron bars are to be enclosed, and properly secured at bottom to the platform and centre pedestal by sufficient iron straps and bolts. The *canopy* to be secured by iron brackets and stays, and the whole to be of the best materials, well bolted together, in the manner exhibited by the drawings. The capitals of the pillars to be of carved oak, and the intervening spaces filled in with tracery, and finished in the best style of workmanship.

PLASTERER.

The whole walls, ceilings, soffits, &c., of both churches, and all partitions, passages, lobbies, staircases, or other apartments thereto belonging, to be plastered with 3-coat plaster of the best workmanship. Furnace-chambers to be finished with 2-coat plaster, and all parts of walls specified to be covered with deal lining, to be previously plastered with 1 coat of plaster carefully laid on.

The whole mouldings, tracery, and cusped perforations of every description represented in the drawings to be run with iron moulds, and in other respects finished with the greatest precision and accuracy. The foilage and other ornaments to be put out of hand in the neatest style.

The whole of the plaster-work to be of the best description, both in reference to materials and workmanship, free of cracks, blisters, water-marks, &c., and completed in the most satisfactory manner throughout all the details ; and, with the exception of the ceiling of West Church and ceilings of recesses in East Church, to be neatly drawn in when damp, and tinted in imitation of ashlar-work.

SLATER.

Sloping sides of the roofs to be covered with the best Bangor slates, or Welsh rags, of a size averaging at least 3 feet × 2 feet, and not less than ½ inch thick, laid upon the rafters, which are to be placed at widths suitable for the purpose, and to be hung with copper nails, of the weight of 16 lbs. per thousand, 2 in each slate; the whole to be pointed, or rendered inside with lime, well haired, and of the best quality in other respects.

Every slate to have full and sufficient overlaps, and the whole work to be otherwise finished in the best and most tradesmanlike manner, made completely water-tight, and upheld so by the Contractor for 5 years.

GLAZIER.

All the windows to be filled in with casements of lozenge-formed panes, 6½ inches × 4½ inches, or such other sizes as may be deemed preferable, set in strong leadwork, having the intersections well soldered on both sides, and tied to iron rods or saddle bars, ⅝-inch diameter, which are to be inserted into the mullions for that purpose. The whole to be well cemented, and completed in the most approved manner, of Leith, Dumbarton, or Newcastle crown glass, free from twists or specks, and in other respects of the best quality.

Windows in sessions-rooms to be glazed in the best manner, and with the best crown glass, well bedded in putty, and back puttied, the sashes to receive 2 coats of oil paint previous to being glazed.

Two compartments in each of the large windows, and one in each of the smaller windows, in both churches, to be made to open, for the purpose of *ventilation*, to have proper fasteners, hinges, &c., for that purpose, and to be otherwise finished as shall be directed.

The difference of expense between the leadwork as above described, and *casements of cast iron* of the best quality and workmanship, to be stated in the estimates.

PLUMBER.

Platforms, both of churches and tower, to be wholly covered with best cast lead, 8 lbs. to the foot superficial, having the necessary rolls and overlaps at the joinings; the distance between each roll not to exceed 30 inches; the lead to be dressed up against the walls of tower and parapets fully 6 inches, and down to the lead of the gutters, which is also to turn up at least 6 inches against the parapets, &c.

Gutters to be laid with 8-lb. lead, properly and fully overlapped at the drips, and otherwise made perfectly sufficient; the lead to be of such a breadth as to stand on each side of the gutter at least 1½-inch above the top of the highest adjoining drip.

Flashings, or aprons, of 7-lb. lead, 5 inches broad round all gutters, skews, &c., to be joggled or grooved into the parapets, the grooves being closely filled with lead or mastic, as may be required; 7-lb. lead for ridges to be 16 inches broad; rain-water pipes of 7-lb. lead 5 inches diameter, well soldered at the joints, with very large cisterns and gratings at the tops, to be placed in the several situations shown by the plans, openings or channels being formed in the walls for that purpose; gutters to be all provided with sufficent overflow pipes, and otherwise constructed upon the most approved principles.

Cisterns to be lined with 7-lb. lead, and to have the necessary ball-cocks, water-pipes, &c.; water-closets to be fitted up with the most substantial and approved apparatus, have ¾-inch feeding-pipes, cesspools, &c.; soil-pipes to be 5 inches diameter, and the whole put out of hand in the most complete manner.

A neat *wash-hand basin*, with brass plug, socket, and chain, service-pipe, nose-cock, &c., to be placed in each water-closet, or such other place as may be directed; *service-pipes* to be connected with the main pipes in Castlehill Street at the expense of the Contractor.

SMITH, &c.

Cast-metal struts for trussing beams of galleries, &c., to be 4 inches × 1½ inch.

Material.—The whole of the bolts, king posts, straps, &c., for the roofing and beams, to be (of the best wrought iron from Lowmoor, or iron of at least equal quality) suited in every respect to the purposes for which they are intended. Iron straps to be 3 inches × ¾ inch; bolts to average 1 inch diameter, with strong heads, washers, nuts, &c.

Cast-iron pillars for supporting the nave walls of West Church to have flanches at bottom, set upon lead into large stone plinths, and securely bolted to wall plates at top, as may be directed. The diameters to be 13 inches at bottom and 11 inches at top, having ornamented capitals, and strong corbel pieces, constructed so as to receive the beams for supporting the galleries, as shown by the drawings. Thickness not to be less than 1½ inch.

Fittings.—Doors of pews or seats to have 3-inch joints, and neat substantial *spring latches*, with brass knobs, of the most approved kind in every respect. Folding book-boards, &c., to have 2-inch hinges and iron brackets. Outer doors to be hung with strong 8-inch double joints, 3 on each leaf; each door to have a lock worth 25*s*., and 2 strong Scots-made bolts with sockets, run in with lead for securing them.

Inner doors to be hung with 7-inch double joints, 3 on each door, with strong Scots-made mortice-locks or latches, as may be required. *Water-closets* to have spring latches, and bolts of the best quality. Closets or presses to have good *locks*, and in every respect completed in the best manner.

Balusters of stair-railings to be of best malleable iron 1 inch square, with strong copes, and otherwise fitted up in a neat and substantial manner.

Ornamented *railings* of platforms behind the pulpits to be made according to the accompanying drawings, or such others as may be furnished. Pulpits to have casting hinges, constructed in the neatest manner.

All doors of furnace-chambers, tower, and similar places, to have strong cross-tailed hinges, and suitable Scots-made locks. Hatches of roofs to have suitable cross-tailed hinges with stay-bars, &c.

GENERAL CONDITIONS.

1. The several works hereinbefore described to be executed in strict conformity to the relative drawings and designs, or such others as may hereafter be provided, and no deviations whatever to be made therefrom without the express authority of the Architect, who is to have full power to judge of the quality of the materials, of the manner of executing the various works, and of the proper mode of conducting them; in which particulars the Contractor will be required to follow his directions, as well as in all inferior

matters, such as bonding of the stones, mixing of the mortar, size and number of the cramps or bolts, running them in with lead, and in all other details affecting the proper execution of the works.

2. It is distinctly to be understood that all the works necessary for the erection and completion of these churches are to be executed in the most approved, substantial, and tradesmanlike manner, entirely to the directions and satisfaction of the Architect, or any inspector who may be appointed to the superintendence of the operations.

3. The Architect, or in his absence the Superintendent or Clerk of Works, is to have power to stop the progress of the works should he find any part done, or doing, in a slight or unsubstantial manner, or in any respect inconsistent with the foregoing specification and relative drawings. He shall also have power to direct the same to be immediately taken down and re-erected at the expense of the Contractor, or to be otherwise rectified in any way he may consider right and proper.

4. Alterations made during the progress of the work shall not invalidate or make null the contract in any respect. Work executed in addition to what is implied or expressed by the foregoing specification, or by the various plans, sections, elevations, or other drawings referred to, shall be measured and charged in conformity with the prices of the general estimate; and such work as is included in this specification, and the drawings aforesaid, but not required to be executed, shall be deducted from the amount of the contract at the same rates. It is therefore indispensably requisite that each intending Contractor should accompany his offer with the *measurement and schedule of prices* relative to his general estimate, fully filled up and calculated; it being understood that no schedule will be examined except the one corresponding to such offer as may be approved of by the Council.

5. Should any omissions in the foregoing specification be discovered, or should any explanations appear defective, or should the manner of performing any part of the necessary works have been omitted to be described, no such omissions or errors are to be allowed to affect the contract, but the value of them shall be considered as included in its amount, and the manner of executing works so circumstanced is to approximate as nearly as possible to such other parts of a similar description, as may have been more particularly specified or explained.

6. The Contractor to provide materials of every description, as also all centrings, scaffoldings, tackles, and implements of every kind, which may be necessary during the progress of work, includ-

ing whatever may be required for the full completion of the building in every particular, either referred to or implied by the specification or relative drawings.

7. The utmost possible extent of ground adjoining to the site of the churches, which may be at the command of the Council, will be allotted for carrying on the operations of the Contractor; but the Council will not be held responsible for obstructions, which may be occasioned by the taking down of old buildings, or other operations connected with the improvements in that quarter.

8. It is necessary on the part of intending Contractors to state distinctly the quarry to which their estimate refers; understanding that Humbie, Binny, Collelo, or any quarry producing stones of equal quality, will be considered fit for the purpose, providing a sure and constant supply is guaranteed. The expense of executing the whole of Craigleith stone may also be stated.

9. The Contractor will be required to give security to the satisfaction of the Council for the performance of the contract according to the intent and meaning of this specification, and for the completion of the whole work within two years of the commencement thereof, or within such other period as may be approved of by the Council.

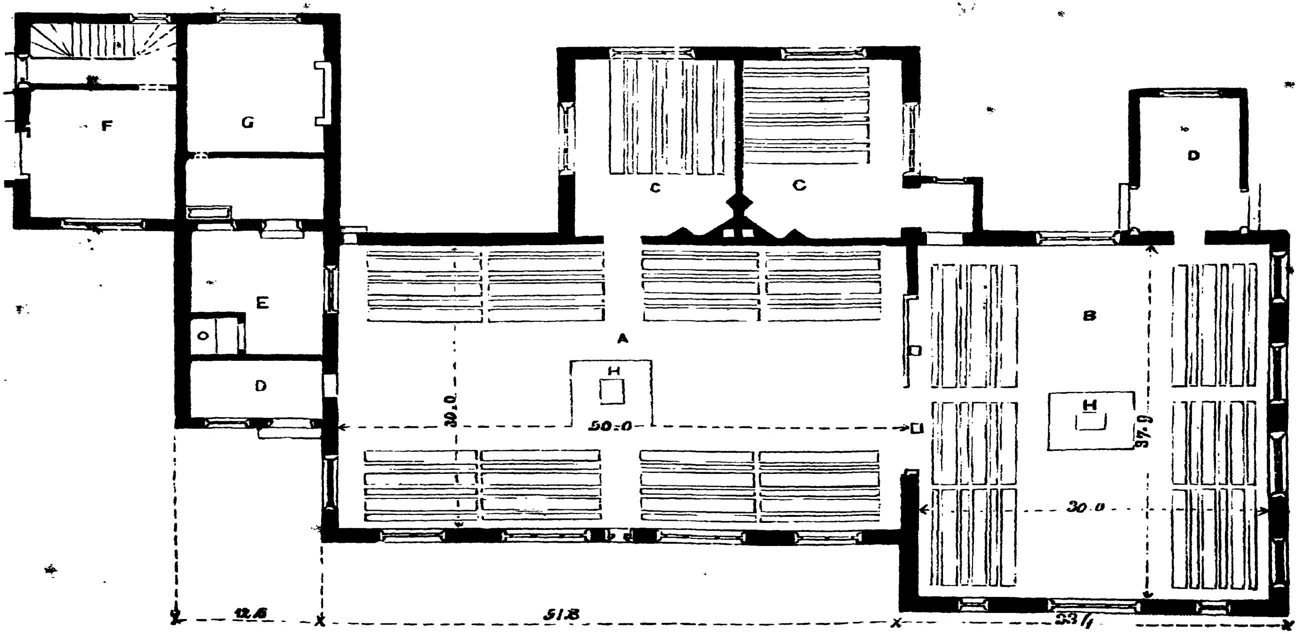
Specification of Works to be done in Erecting ST. JOHN'S NATIONAL SCHOOLS, MARGATE, KENT, *with a* MASTER'S DWELLING-HOUSE *attached, agreeably to the Drawings prepared by* MR. GEORGE MAIR, *Architect, and numbered one to seven, Drawings inclusive. Erected* 1853-4.

EXCAVATOR.

DIG out the ground to the depth and width required for laying in the concrete for the footings of the several walls shown upon the drawings, and properly level the whole area within the walls, of the entire buildings, filling in with hard brick rubbish those portions of the buildings hereafter described to be paid.

Excavate the ground to the required depth for the rain-water tank, the main cesspool, the soil-pits under the privies, and for laying in the several drains shown on Drawing No. 5.

Properly ram and consolidate the earth against all walls, drains,



Margate Schools

tank, cesspool, &c., and execute all levelling, digging, filling in, ramming, and other ground-work for the formation of the 2 play-grounds, yards, and approaches to the buildings.

Remove and cart away all superfluous soil and rubbish from time to time, and at the conclusion of the works.

Each play-ground to be laid with a sufficient incline for drainage with 4-inch York dished and perforated sink stones, 1 to each play-ground, each sink stone bedded on a 9-inch brick receiver, 2 feet square and 18 inches deep, set in and rendered in cement, with 2½-inch York dip stone complete, with 4-inch earthenware pipe drains laid from the receivers to carry the waste water into the soil-drains; a trap to be formed at the entry of each drain.

BRICKLAYER.

The *concrete* under the walls to be composed of clean washed shingle and stone lime, mixed in the proportion of 1 part lime and 6 parts shingle, to be thrown into the trenches hot, and levelled to receive the footings of the several walls, as shown on the drawings.

The *rain-water tank* and *main cesspool* to be constructed, and of the size shown and figured on Drawing No. *5*; each to have a man-hole 2 feet diameter, brought up to within 9 inches of the surface of the ground with a 3-inch York stone cover, and iron ring in same. The whole of the inside of the rain-water tank to be rendered in cement.

Construct the *soil-pits* under the *privies* as shown on the drawings, the inside of the same to be rendered in cement.

Sink a *well* 80 feet deep, or deeper, and until a sufficient supply of water can be obtained. The well to be steigned in ½-inch brick, and domed over with man-hole and stone cover as cesspool.

The whole of the *drains* to be *earthenware tubular drains, glazed* inside only, and laid with a fall of not less than 2 inches in 10 feet, and the points and connexions of the drains to be carefully made in cement. The *soil-drains* to be 9 inches in diameter, and the rain-water drains to be 4 inches diameter. Each junction length of rain-water drain to be a trapped length.

Take down the portions of the present *boundary flint walls* for the gate entrances, where shown on Drawing No. *5*, and make good and repoint the present boundary walls where necessary.

The *footings* to all the walls, the internal walls, fire-places, and flues, &c., coloured *red* on the several drawings are to be built with new sound, hard, well-burnt bricks.

The *external walls* above the brick footings to be faced with

Kentish ragstone, backed with hassock; the whole of the work to be properly bonded and flushed in, so that no vacuities are left between the joints or courses.

The *external fronts* of all the walls to be finished in neat random-coursed work, the stones being hammer dressed to a fair surface and neat joint, and the whole external fronts to be neatly pointed. The blue tint shown upon the elevations denotes the parts to be executed in *Bath stone* as described in the Mason's work.

Cement.—The whole of the cement used to be of the best quality. Build all the ½-brick walls in cement.

The *mortar* to be composed of stone lime, and sharp clean-washed sand, mixed in the proportions of 1 part lime to 2 parts sand, well beaten and tempered together. The lime to be carefully kept from exposure until required for use.

The whole of the walls to be carried up regularly together, and to be of the heights and thicknesses shown upon the drawings. The piers to carry the plates of the floor joists are to be of rag-stone not less than 9 inches square, as shown upon the drawings.

Flues.—Build the whole of the flues with the easiest bends possible, and properly core and parget the same; a flue from the centre of each school-room is to be formed as shown on the drawings, and carried up at the back of the class-room fire-places. These flues are to be covered with York stone, and 2 soot-doors provided to each flue under the floor, to be formed where directed.

Stone fenders to all fire-places on ground-floor, and turn 9-inch brick Camber arches to all the *fire-place openings*, and ½ brick trimmers to carry the hearth-stones of all fire-places above the ground-floor. Turn 9-inch relieving arches over all openings in brick walls. Cut all necessary splays, and bed and point in lime and hair all door frames.

Properly prepare for and leave holes for the cast-iron gratings and ventilators for the admission of fresh air, and for the ventilation of the buildings, as will be directed.

Perform all the necessary brickwork for setting the grates, &c., in the dwelling-house and class-rooms. The copper in scullery and range with oven, &c., in kitchen.

Privies.—Provide and fix to the privies No. 7 glazed earthenware pans, with a straight length of pipe from each, to dip into the soil-pits. The brick-riser to the doorway of each privy and urinal to be formed of brick on edge in cement. Cope the walls of the privies with 2-inch York coping in cement.

CARPENTER'S WORK.

Materials.—The whole of the timber required to be used to be of the best Memel, Riga, or Danzic fir; the deals to be yellow Christiana, Archangel, or Gefle. The oak to be English; all the timber deals and oak to be dry and well seasoned, and to be free from shakes, loose, or dead-knots, and every other defect (no American timber to be used.)

The *roofs* to be constructed according to the drawings, and all timbers are to measure the *full scantlings* specified thereon, when fixed in their places. No quarter joist or rafter to be more than 12 inches apart. The plates, purlins, and ridges, are to be in as long lengths as possible, and well scarfed and secured at the junctions. The edges of the roof timbers in sight are to be chamfered.

The mode of constructing the ventilating turret over the school is shown on Drawing No. 6; and the brestsummer and posts to the gates in the division wall between the two schools to be of the scantlings shown on Drawing No. 7.

The *internal doorways* are to have fir lintels 4 inches thick, the width required by the thickness of the walls; a sufficient number of wood bricks to be built in the walls and wherever required to afford a firm fixing for the joiner's work.

The *fence* dividing the play-grounds, and fences to the entrance of the girls' school, as shown on Drawing No. 5, are to be of oak-cleft paling, 5 feet high, with oak posts 5 inches × 5 inches, and 7 feet 6 inches long; the butt ends charred and let into the ground 2 feet 6 inches, 1 post to be fixed in every length of 8 feet as nearly as the divisions will allow, with a top and bottom oak-arris rail out of 5 inches × 5 inches framed to the posts, and the pales securely nailed to the 2 rails with zinc nails, the ends of the pales to be kept off the ground 2 inches.

A *gate* in the fence where shown on Drawing No. 5, the gate to be 4 feet wide, and to have top rail and stiles of oak 4 inches × 2 inches, and bottom rail 8 inches × 2 inches, and a diagonal brace 4 inches × 2 inches. The pales are to be securely nailed over the surface of this framework, and the gate hung to oak posts 5 inches × 5 inches as before described, with stout hook-and-eye rising hinges; the lower hinge cranked so as to close the gate. Fix on each gate a stout iron thumb-latch.

Two entrance gates in boundary walls are to be framed as shown on Drawing No. 5. The posts to be of oak 5 inches × 5 inches, wrought, framed, rebated, and stop chamfered, and the ends cut as shown on drawing, the butt ends to be charred and run into the ground 1 foot 6 inches, and to tenon into the stone footing of pier, and an oak sill 5 inches × 5 inches, flush with the surface of the ground, to be framed between the posts, to secure them in their proper position. The gates are to have 2½-inch dead stiles, beaded and top chamfered, and 1¾-inch top and bottom rail 9 inches wide, strongly framed to the stiles, stopped and chamfered both edges. This framing to be fitted in with ¾-inch deal matched and beaded both sides diagonal boarding. Fix a moulded capping covering the boarding and the framing of gates, as shown on the drawing.

Provide the necessary labour for fixing the ironwork described in the Smith's work.

JOINER'S WORK.

Work.—All the joiner's work is to be rough framed as soon as possible after signing the contract, and no framework is to be set up until at least three months after it shall have been so framed. All timber-work which shall split, fracture, shrink, part at joints, or show any defect from unsoundness, want of seasoning, or bad workmanship, is to be removed and put together anew, or replaced by new materials, so that the whole of the joiner's work may be delivered up in a perfect state at the completion.

The *floors* of the ground-story to be laid with 1¼-inch yellow deal straight-joint floor, the edges of the floors of the boys' and girls' school and class-rooms to be accurately fitted to the walls.

The *floors* of the master's house and staircase landing to be laid with 1-inch deal straight-joint floors. The entrance passage, staircase, parlour, kitchen, and bed-room story, to have ¾-inch square skirtings 6 inches wide, splayed for plastering.

The external entrance *front doors* are to be framed, as shown on the Drawing No. 6, of 2-inch stiles, and 1¼-inch bottom, middle and top rail framed into them. The framing to be fitted in with ¾-inch deal matched boarding, beaded both sides. The frames to which these doors are to be hung are to be of fir 5 inches × 4 inches, wrought, stopped, and chamfered outside, and beaded and rebated inside, and tenoned into the stone steps. Completely wrap round the feet of all door-frames tenoned into stone steps with a piece of milled lead.

The *inside doors* to the entrance porches and class-rooms are to be 1½-inch deal. Four-panel square doors, with the edges of the stiles and rails chamfered, hung in 1¼-inch square jamb linings, with stops nailed on, and a 2-inch quirk moulding to be mitred round each side of the doorways to cover the joint of the plastering. The doors of the dwelling-rooms are to be 1½-inch deal; 4-panel square doors hung to wrought, rebated, and beaded fir frames 5 inches × 4 inches, with 2-inch quirk mouldings, mitred round to form architraves on both sides, and to cover the joint of the plastering. The doors of the privies to be inch-ledged doors in solid square frame, chamfered on outer edge, with beaded stops nailed on both sides.

The openings in the gables are to have small wrought and beaded frames with ½-inch louvre laths, 1½ inch wide, fitted to the frames to exclude the weather.

The *staircase* to the master's house to have steps of 1¼-inch deal with rounded nosings, and inch deal risers, to be properly glued and blocked, and housed into 1½-inch deal framed outside wall string with moulded capping and beaded under edge, and 1¼-inch raking string with proper ramps to the winders. The winders to be cross tongued and glued at the joints, and each step to be properly bracketed to receive the lath and plaster, 3-inch turned newels, moulded handrail, turned and mitred caps, turned pendants, ¾-inch square bar balusters. The handrail and balusters are to be continued along the well-hole on the landings, ¾-inch beaded fascia to the well-hole, and rounded nosing to ditto.

Privies.—Provide and fix the timbers to carry the roofs over the privies. The seat and riser of the master's privy to be of inch deal with rounded nosing, with a round cover and handle to seat. Lay on proper fir joists inch-deal floor in privy, and fix round the privy a narrow square skirting, bedded in lime and hair against the walls. The seats and risers to the children's privies to be of 6-inch deal, with rounded nosing, and provide and fix all the seats on proper fir bearers.

The *partitions* on the upper floor of master's house are to be of 1¼-inch square framing, 3 panels high, with 1¼-inch square 4-panel doors hung in do. to the rooms and closet, with beaded and mitred stops put on.

The *folding doors* forming the partition to divide the boys' and girls' school-rooms, are to be framed and hung as shown upon the detail Drawing No. 7.

The *children's desks* are to be of 1¼-inch deal, 12 inches wide, with the top corners rounded, and each desk to be supported on 3 cast-iron legs, each being screwed to a piece of wrought deal, 3 inches × 1½ inch, which is to be furnished at each end with a dovetailed piece of cast iron, the iron end to the stands of forms being made to fit into them, as shown on Drawing No. 7. Holes are to be cut in the desks at every 18 inches in length to receive round lead ink-pots, being covered by a sliding zinc plate, fitted in a zinc frame, screwed to the top of the desk. The top of the desks to be grooved to receive pencils and pens.

The *forms* to be of 1¼-inch white deal, 7 inches wide, the upper edges and corners at the ends to be rounded. Each form is to be supported on No. 3 cast-iron legs, and the bottom of the legs are to be screwed to pieces of deal 3 inches × 1¼ inch, furnished with iron dovetailed ends as described for desks, rendering the forms as well as the desks moveable at pleasure.

Peg Rails.—The boys' school-room to be furnished with 200 feet run, and the girls' school-room with 150 feet run, of inch deal rail 4 inches wide, chamfered edges, with japanned iron hooks in every 12-inch length. The rail to be properly fixed to the walls as will be directed.

A *dresser* to be provided and fixed in the kitchen, 5 feet long, with 3 drawers and pot-board under, and 3 tiers of plate-shelves and standards over; and fix in the master's house 75 feet run of 1-inch deal shelving, board wide, wrought both sides, with necessary brackets to carry the same.

General.—Provide and fix all requisite centring and turning pieces, also all blocks and wood bricks for fixing the joiner's work; also all plates, templates, blockings, fillets, stops, bearers, bridgings, firrings, strutts, braces, temporary carriages, &c. &c., and whatever else may be requisite to complete the carpenter's and joiner's work.

MASON'S WORK.

Material.—All the stone used in the mason's work is to be of the best quality, free from shakes, flaws, or rents, and all other defects.

Bath Stone.—The piers and caps to entrance gates, and the whole of the jambs, heads to doors, with the jambs, heads, mullions, and sills to windows, and openings for ventilation in gables, bell-turret, coping to gables, &c.; upper part of chimneys, splayed upper part of plinth, &c., and all parts indicated on the drawings by the blue tint, not otherwise described, are to be executed in Bath stone from the Corsham Down Quarry; the whole to be properly worked to a fair face, jointed and bonded into the walls, and finished according to the drawings.

York Stone.—Pave the privies, urinal, scullery, and porches with 2½-inch tooled York paving bedded in mortar on solid foundation. The urinal to be paved with a fall into a channel stone for drainage into the soil-pit.

Steps.—Properly fix at the entrances to the buildings, where shown on the drawings, solid rubbed York steps, 6 inches thick and 12 inches wide. The upper steps to the entrances which have doors to be properly cut and prepared to receive the door frames, and the outer angles of the lower steps to be rounded and morticed for iron scrapers.

Chimney-pieces.—Provide and fix to the fire-places in master's house 1½-inch Portland stone jambs and mantels 7 inches wide, with inch Portland stone shelves, 8 inches wide, except to the parlour, which is to have a plain boxed Portland stone chimney-piece of the value of 30s., including the fixing; and fix 2-inch tooled York stone hearth slabs to all the fire-place openings throughout the buildings.

Corbels.—Properly insert and bed in cement into the walls Portland stone corbels under principals of roof of the boys' and girls' schools. The corbels to be 8 inches on face, and of the depth, and moulded as shown on the drawings; and provide and fix 3-inch York stone corbels to support the ends of all timbers situated too closely to a flue.

Sink.—Properly pin into the walls of the scullery a 6-inch York sink stone, of the size shown on ground plan, with hole cut in same for a bell-trap, and waste pipe to drain.

General.—Cut all requisite rebates, grooves, chases, holes, back joints, fair edges, and perform all other labour usual or necessary to mason's work, the whole work to be properly cleaned off and left perfect at the completion.

SLATER'S WORK.

Cover the whole of the roofs with the best Bangor countess slating. Parts of the slating to the roofs to be laid diagonally, as shown on the drawings. The slates to the roofs over the porches, school-rooms, and class-rooms to be laid on felt on close boarding, and the slating to the remaining roofs to be laid on ¾-inch deal battens, 2½ inches wide. Each slate to be secured and nailed with 2 copper or zinc nails, and to have a lap of 2½ inches. The eaves to be laid double.

Cisterns.—Fix in the scullery and in each of the porches, where directed, a slate cistern to hold 250 gallons of water, made of inch Bangor slate, sides and bottom to be jointed together in the most approved manner, and properly secured with iron-rod bolts. Each cistern to have the necessary brasswork securely fastened to the slate bottom, to which service and waste pipes may be soldered.

General.—The whole of the slater's work, required to be executed, is to be completed in the best manner, and left perfect at the finishing.

PLASTERER'S WORK.

Render, set the interior walls of the porches, the Boys' and Girls' schools, 2 class-rooms and Girls' lobby to do., and the walls of the Master's dwelling-house, and lath, lay, and set the partitions on upper floor, where not otherwise described.

Lath, lay, set, and whiten the ceilings and underside of stairs, and ceiling of Master's privy.

The walls of the school-rooms, porches, class-rooms, and Girls' lobby thereto, are to be rendered in cement inside to the height of 5 feet from the floor level, and the plastered walls above are to be neatly jointed, and twice coloured down stone colour.

Properly stop and twice colour down the walls of the scullery, kitchen, and Master's privy drab colour.

The fire-place openings to the class-rooms to have 9-inch jambs, and mantels run round the same in cement 1 inch in thickness, the edges to be splayed.

The underside of the eaves of all the roofs between the iron gutters and the walls to be lathed, plastered, set, and twice whitened.

The walls of the interior of the privies and urinal to be twice lime-whitened.

PLUMBER'S WORK.

Cover the ridges with 6-lb. milled lead, 21 inches wide, neatly dressed round the rolls, and properly tacked, and lay the gutters to the roof, as shown on the Drawing No. 2, with milled lead 6lb. to the foot superficial, with 1½-inch drips, 1 in every 9 feet, as nearly as the division will admit. The lead to turn up against the wall 6 inches, and 9 inches up the slope of the rafters.

Cover the roofs of ventilating turret with 5-lb. milled lead, properly tacked and dressed; and lay proper flashings with 4-lb. milled lead at the foot of ventilating turret, and to the chimney-stacks and gables, properly stopped down the slopes of roofs, and dressed down upon the slates 6 inches.

Pump.—Provide and fix in the scullery a proper lift-pump, with 2-inch suction pipe to well, and a force pump with suction pipe from rain-water tank, and service pipes to supply the slate cistern in the scullery and porches, as will be directed, including all necessary joints and labour; a ¾-inch service and bib cock to be fixed to each cistern, and each cistern to have 1½-inch waste pipe to conduct the overflow water to drains.

Traps.—Properly solder down in the sink in scullery an iron grating and bell-trap, with a 2½-inch waste pipe, trapped to take the waste water to drains.

Provide and fix ⅝-inch lead lights to receive the glass of windows, properly tied to the iron stay-bars and to the opening sashes with lead bands.

PAINTER'S WORK.

The whole of the iron frames before being fixed in the stonework are to receive 2 coats of boiled oil, and they are afterwards, as well as the opening sashes, to be painted 3 coats of good oil colour finished a lead colour.

The whole of the external wood and ironwork of the buildings usually painted is to be painted 4 times in good oil colour. The entrance doors and 2 entrance gates between the stone piers are to be grained wainscot and varnished. The whole of the woodwork required to be painted is to be knotted, stopped, and properly prepared, brought forward and perfected.

Staining.—The whole of the interior woodwork of the buildings, with all the timbers, boarding of roofs (in sight) over the porches, school-rooms, class-rooms, &c., is to be properly prepared and stained oak colour.

The interior walls of the porches, school-rooms, class-rooms, and Girls' lobby thereto, to be properly brought forward, and painted in 4 oils stone colour to the height of 5 feet from the floor levels.

The inside ironwork and straps, bolts, &c., to roof timbers to be painted in 3 oils, and all the painting and staining to be left clean and perfect at the finishing.

PAPERHANGER'S WORK.

The passage, staircase, closet, and bed-rooms in Master's house are to be papered with paper of the value of 2d. per yard, cut close, and the walls of the parlour are to be hung with paper of the value of 3d. per yard, cut close.

The papering to be left perfect at the completion.

GLAZIER'S WORK.

All the windows to be glazed with Newcastle crown glass in quarries of lead, and to be left clean and sound in all respects on giving up possession of the buildings.

SMITH'S WORK.

The hinges, handles, latches, and escutcheons to the entrance gates, are to be executed as shown on Drawing No. 5, and a wrought-iron spiked ornament is to be fixed on the capping of each gate.

The *doors* in the yards and privy doors are to be hung with 12-inch stout cross-garnet hinges, with a good japanned thumb-latch on each.

The *entrance doors* to porches, boys' school, and master's house, to be hung with ornamental wrought-iron hinges, the hinges are to clip the door on both sides, and the bolt heads are to be neatly worked. Fix on each of these doors a good 10-inch dead lock, and a latch with external drop handle to be made to order. Each lock to have an ornamental (Gothic) escutcheon outside. The master's entrance door to have a 7-inch drawback lock, and two 7-inch iron-rod bolts.

The doors to the school-rooms, class-rooms, and all the doors in the Master's dwelling-house, to be hung with 3½-inch cast-iron butts, with a 7-inch 3-bolt brass knob iron-rim lock fixed on each door.

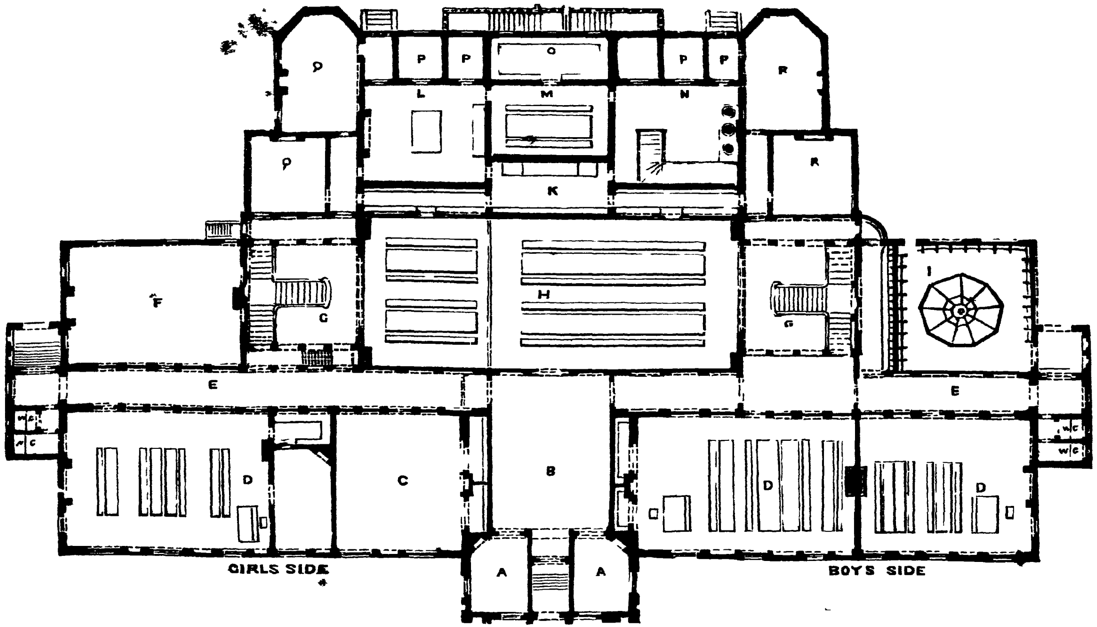
Guttering.—Provide and properly fix 6-inch square and moulded cast-iron guttering to the eaves of roofs, with shoots from the same to the ornamental cistern heads fitted on to 3½-inch square cast-iron rain-water pipes, which are to have proper shoes to conduct the water from roofs into the drains to the rain-water tank. The positions of the several pipes are shown on the drawings.

Sash Frames.—Provide and fix in the stone jambs and mullions ⅝-inch × 1½-inch cast-iron casement frames, with 2 cross bars to each, to receive the lead lights. The upper compartment of each window in the class-rooms and school-rooms hinged to fall back and open into rooms, as shown on Drawing No. 6, with angular frames of iron at each end to receive the sash when open, and to prevent the entrance of rain. Fix proper pulleys and lines to all these windows.

The *casements* in the Master's house to be hung with hinges, and 1 compartment of each window is to open outwards with a latch and stay bar to each.

Provide and fix all iron straps ½ inch thick by 1¾ inch wide, with ¾-inch bolts, &c., and ironwork to roofs as shown on drawings.

To provide and fix No. 4 *Arnott's ventilators*, 1 to be inserted in each class-room and school-room flue, as will be directed. Build into the walls of schools and class-rooms No. 14 cast-iron *air gratings* 9 inches × 2½ inches, with plates of zinc inside the walls for ventilation, as shown on Drawing No. 4, with No. 10 *valvular*



Brixton Schools.

J. B BUNNING, ARCHITECT.

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gratings 8 inches wide, inserted in school and class-room floors as will be directed.

Provide and fix in a secure and proper manner an ornamental *vane with cap*, &c., to the ventilating turret in centre of Boys' school-room roof.

All the external entrances are to be furnished with a strong wrought-iron *scraper* fitted to the lower step, and run with lead. Fix strong iron *wire guards* to the air openings in gables.

Copper.—Provide and fix in the scullery a copper capable of containing 30 gallons, of 16 oz. metal, with materials and setting, including furnace door, fire bars, and other ironwork, &c., complete, and set in the kitchen a *stout range*, with oven, &c., complete.

The Master's dwelling-house to have a *sham register stove* fitted in the parlour, and all the other rooms are to have good *cottage stoves* with cast-iron covings, all materials and setting to be included.

To provide and hang a *school bell* in turret, with all the necessary tackle, of the value of *5l.*

Specification of the Works to be performed in the Erection of SCHOOLS AT BRIXTON *for the Worshipful the Freemen's Orphan School Committee.* JAMES B. BUNNING, *Architect.* 1851-52.

EXCAVATOR.

EXCAVATE the whole surface of the ground to be occupied by the buildings to the extremity of the surface of the concrete foundations, and to the depth of the bottom of the footings of the main walls; and excavate the trenches for the concrete foundations the width and depth shown on the drawings.

The earth and gravel excavated to be deposited on the ground surrounding the school, and spread as may be directed.

The clay is to be carted away.

To provide all strutting, planking, &c., required also for keeping the foundations clear of water during the progress of the works.

Roadway.—The Contractor at his own expense to construct a proper roadway from Shepherd's Lane across present ditch and hedge for the conveyance of materials on to the site.

The *Concrete* is to be composed of coarse Thames ballast and ground stone lime, in the proportion of 1 of lime to 6 of ballast, properly mixed with clean water, thrown into the trenches from a stage 10 feet high at least, and spread and levelled as thrown in.

Burnt Clay.—The clay excavated from the trenches, &c., is to be burnt, if so directed, on the premises at the expense of the Contractor, and is to be used, if ordered by the Architect, in the making of concrete for the foundations; and the Contractor to state in his tender the amount he will allow from the amount of contract for every cube yard, which may be ordered by the Architect to be executed with burnt clay instead of river ballast.

Fees.—Give notice to the District Surveyor, and pay his fees and all other fees that may be legally demanded, and provide in estimate the sum of 10*l.* 10*s.* for said fees.

The building is to be erected in conformity with the *Metropolitan Buildings Act.*

The *bricks* are wholly to be sound, hard-burnt, well-formed stocks, except the facings of the external walls above the ground-floor line, which are to be of the best description of red kiln-burnt bricks, of a sample to be approved by the Architect, the joints of facing to be raked out and pointed in blue ash mortar.

The *mortar* to be composed of fresh-burnt Merstham or other approved lime, and clean sharp Thames sand from above bridge, in the proportion of 1 of lime to 3 of sand, to be used fresh, and no greater quantity made in one day than is sufficient for the day's consumption; the whole to be properly mixed with clean water.

The *Roman cement* to be also of a manufacture to be approved by the Architect.

Carry up the walls, piers, sleeper and fender walls with footings, as shown on the drawings.

Turn inverts under openings of ground-floor, and cut and render seats for ditto; turn ½ brick trimmers to all chimney openings which have not fender walls.

Turn brick arches in cement on iron girders over the cellars in basement, as shown on drawings.

Turn double tiers of arches formed of 3 courses of plain tiles, bedded in cement, breaking joint over coal-stores, larder, &c.; the upper tier to form Flat, and the lower to form ceiling; the upper tier to have a layer of *concrete* 4 inches thick, floted to a smooth surface, and to a fall, and covered with *Seyssel asphalte* ¾ inch thick, with sunk gutter formed on one side, and proper skirting up walls, and made perfectly water tight.

Hoop-iron Bond.—In all the walls on each story of the building, 3 tiers of hoop-iron bond, 1½ inch wide, 16 gauge, tarred and sanded, are to be inserted; 1 layer to every ½ brick in thickness.

The walls of the dining-hall and kitchen to have 4 tiers of iron bond, and in all the walls the 2 courses above and the 2 beneath the iron bond are to be built in cement, as are also the first 4 courses above the footings, with a tier of hoop iron inserted therein.

Air-bricks.—Provide and insert in all the external walls beneath the level of the ground-floor, No. 60 9-inch cast-iron air-bricks.

Stone Cores.—Provide and insert courses of 3-inch rough York stone, bedded in cement where requisite in all the projections for cornices, &c., from the face of the external walls, and form cut courses for the mouldings all built in cement.

The *external arches* of the openings, where not covered by cement dressings, to have best gauged and rubbed arches of similar bricks as to facing, and pointed with blue ash mortar.

Pave the cellars with brick, flat, bedded and jointed in mortar, on a bed of concrete 6 inches thick. Point and twice limewhite the walls of Boys' urinal place, knife, and shoe-room, and coal and potatoe stores on ground-floor.

Generally to cut all rakes, splays, &c., rake out and point all lead flashings; bed and point all door and window frames; parget and core all flues; cut out for and pin in cement all ends of timbers where necessary, and do all other Bricklayer's work necessary to complete the buildings according to the full intent and meaning of the drawing of this specification.

Drains.—To execute the several drains as shown on the drawings with glazed earthenware pipes, with socket joints in cement, with all necessary bends, junctions, and syphon pieces, and connect the ends of rain-water pipes with same; also excavate to a sufficient depth and to a proper fall for same, and fill in and ram the earth afterwards.

Provide 90 feet lineal of 12-inch pipe drain as before described, and digging for same to an average depth of 10 feet.

Provisions.—To be deducted if not required at the several prices affixed:—

	£	*s.*	*d.*
200 yards cube concrete, and digging for same, at per yard cube.			
20 rods superficial reduced brickwork in cement, at per rod, ...			
100 days, bricklayer and labourer, at per day			

The Contractors to state separately in their tenders the additional expense of covering the foundations of main and cross walls above the footings with Seyssel asphalte ¾ inch thick.

MASON.

Material.—All the *stone* to be of the very best description, free from sand holes and other defects, and the whole to be laid on its natural bed.

York Stone.—All *copings* to walls to be 3-inch tooled Yorkshire stone, of the widths required, weathered and throated, jointed in cement, and cramped; the coping to the back area to be also tooled 3-inch Yorkshire stone, with holes cut for railing, and run with lead.

Portland Stone.—All the moulded *chimney-caps* to the main building to be of Portland stone.

All *sills* of windows to be of Portland stone sunk, weathered, and throated, the joints plugged with lead, those to the entrance front and returns up to water-closet wings, also porter's lodge, to be 7 inches thick; all the others to be 5 inches thick, and of the width required.

The *keystone,* with the City Arms in front of the building, to be of Portland stone.

The dies and caps of pedestals, the balusters and capping on same to the balustrade over entrance and Porter's room, to be also of Portland stone, moulded, weathered, sunk, and throated, as shown on drawings. To provide all necessary slate dowels, mortices, and cement, lead plugs and mortices, and 8-inch galvanized iron cramps, mortices and lead, to secure the whole of the Portland stonework in the best manner. All steps, both externally and internally, to be of rubbed Parkspring stone, the joints plugged with lead, and of the sizes shown and required, also all landings.

The landing at entrance door, principal front, to be full 3 inches thick; also the landings of the other entrances where bedded on sleeper walls; where not so bedded, the landings to be 7 inches thick.

Parkspring Stone.—The *staircases* to be formed of Parkspring rubbed spandril steps, rebated, and back jointed, each in one stone, cut and pinned into walls 6 inches, and 4-inch rubbed landings in large stones, with joggle joints run with lead, and cut and pinned as to steps, and with spandril risers, rebated and back jointed to match steps.

All *external kerbs* to steps to be of rubbed Parkspring stone, 9 inches × 7 inches, rubbed 3 sides, plugged, and run with lead, and bedded on walls.

All the *floors* shown by the blue tint on the ground plan, except larder, coal, and potatoe stores, to be of rubbed Parkspring stone, full 3 inches thick, and properly squared, jointed, and bedded in cement on brick walls in large stones. Pave the larder, coal, and potatoe-stores, and areas, with 3-inch rubbed landing paving, bedded and jointed in cement on a bed of concrete 6 inches thick.

The gallery round entrance hall and in dining-hall to be 4-inch Parkspring, rubbed both sides, landing in large stones, with moulded edge as shown; the joints joggled and run with lead, cut and pinned into brickwork 6 inches all round.

All *fire-places* to have rubbed York hearths and back hearths.

Chimney-pieces.—The master's and matron's rooms on the ground-floor, and the committee-room, to have veined-marble moulded box chimney-pieces, of the net prime-cost value of 80*s.* each, exclusive of fixing.

The remaining chimney-pieces throughout to be plain Portland box chimney-pieces, of the net prime-cost value of 30*s.* each, exclusive of fixing, the whole of the chimney-pieces to be securely fixed with all necessary chimney-cramps and plaster complete.

York Stone.—Provide and set in cement over all girders, which carry walls, 2½-inch tooled York, of the width required.

Templates.—Provide and fix under the ends of all girders tooled York templates as follows:—

To girders carrying tile flats, 3 inches thick, 18 inches × 12 inches; to girders carrying arches of coal-stores, &c., and wall across corridor, 4 inches thick, 18 inches × 12 inches; to girders carrying walls over Porter's room, and opening from gallery to dining-hall, 4 inches thick, 18 inches × 18 inches.

A course of 3-inch tooled York, the full width of the walls, bedded and jointed in cement, and cramped, to be set for the purpose of fixing the cast-iron eaves cornice of front building.

York Landing.—Cover the strong closets with 5-inch tooled York landing, set in cement, the joints joggled and run with cement (to form ceilings).

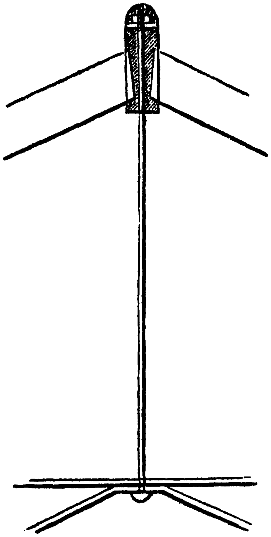
Corbels of 4-inch tooled York, cut and pinned in cement, wherever necessary, for chimney-breasts, &c., also corbels of 3-inch York, 14 inches × 9 inches, for trimmers for chimneys, &c.; and templates of 3-inch tooled York, 12 inches × 9 inches, to receive ends of heads and sills to partitions where required, all to be set in cement.

Generally.—Cut all mortices for doorposts, balusters, girders, &c., and all perforations for pipes, flues, &c., and run with lead wherever necessary, to secure ironwork to stone.

CARPENTER.

Materials.—The *fir* to be new best yellow crown Memel, free from all defects. The *deals* to be the best thoroughly seasoned hearty yellow Christiana, free from all defects. The *oak* to be the best English growth, well seasoned and straight grained.

ROOFS.



Front Building.—Wall plates, 5 inches × 4 inches; principal rafters, 6 feet apart, 7 inches × 3 inches; collars, 7 inches × 3 inches; purlins, 5 inches × 3 inches; hips and ridges rounded at top, 10 inches × 2½ inches; the ridge morticed ¾-inch in to form abutment for the principal rafters, and notched out on the top to receive the nut and washer of the king-bolt. Inch wrought-iron tie rods to each pair of principals, of the form shown, with screwed ends to pass through the wall-plates, and screwed up with wrought-iron nuts and plates; the nuts 2 inches square, 1 inch thick; the rod to be flattened in the centre, and drilled to receive the king-bolts, which are to be of wrought iron, ¾-inch diameter, with neat stout head under the tie rods, and screwed end to pass through the ridge, secured with a strong nut and plate.

The collars to be securely halved and spiked to the principal rafters, and the principal and other rafters well spiked to the plates and ridges; common rafters, 5 inches × 2½ inches, 12 inches apart; angle-ties and dragon pieces, 6 inches × 4 inches; ceiling joists, 5 inches × 2½ inches.

Over *Girls' washing and bath-room*, and that over the *Servants' bed-rooms*, to be of the same construction as that described for the front building, with two pairs of principals.

Dining-hall.—Wall plates, 5 inches × 4 inches; rafters under sill of lantern, 7 inches × 2½ inches, 1 foot apart; sill, 6 inches × 4 inches; head, 4 inches × 4 inches; angle and principal posts, 4 inches × 4 inches, 8 feet apart; braces and quarters, 4 inches × 2 inches. The 3 compartments in the lantern to be formed with similar timbers; hips with rounded edge, 9 inches × 3 inches;

deal wrought weathered and moulded hips and ridges to lantern, 7 inches × 3 inches, with 2½-inch rounded roll, and oak cross tongue and double grooves to secure ditto ; ¾-inch deal wrought linings, staff-beaded on inside, and 2½-inch deal filling in between iron bars over divisions of lantern outside.

The roofs and lanterns over the two principal staircases to be formed in a similar manner to that over the dining-hall, but the rafters to support the sill to be 5 inches × 2½ inches, and the hips and ridges of lantern 6 inches × 2½ inches.

Over the Master's and Mistress's Houses.

	In.		In.
Wall plates	5	×	4
Rafters and collars	5	×	2½
Ceiling joists	4	×	2¼
Binders for do.	9	×	3½
Hips and ridges rounded	10	×	2
Valleys	10	×	3
Angle ties and dragon beams . . .	6	×	4
Joists to lead flat	7	×	2¼

Over Kitchen, Servants' Hall and Boiler-room.

Wall plates	5	×	4
Rafters	6	×	2½
Collars halved and spiked to each rafter .	6	×	2½
Rounded ridge	10	×	2

Lead Flats.—Joists to lead flat over Boys' washing-room 10 inches × 2¼ inches, over principal entrance 6 inches × 2½ inches, furred up for current ; form 1½-inch drips, and lay the flats with inch rough deal, edges shot, 2-inch deal rounded rolls, not more than 2 feet 6 inches apart.

Gutters to be formed with 1¼-inch yellow deal and framed bearers ; 1½-inch drips and cesspools where requisite.

Cover the several roofs with ¾-inch rough yellow deal, edges shot ; provide all requisite tilting fillets ; the upright sides of lantern lights over dining-hall and staircases on the outside to be covered with inch deal rough boarding, jointed for lead, with rounded rolls on ditto.

Fix lintels where requisite over openings of doorways, and to windows, &c., the width required, 4 inches deep, and 18 inches longer than the width of the openings.

Wood bricks in sufficient number for fixing linings, jambs, skirtings, and other joiner's work.

Floors.—Wall plates of fir 5 inches × 4 inches for all floors on the first and second stories. *Joists* for the first and second floors of the front building, and for the girls' washing and bath-rooms, and the servants' bed-rooms, 14 inches × 2½ inches, trimming joists 14 inches × 3 inches, properly notched down and spiked to the plates, and 3 tiers of *herring-bone strutting* between the walls on each floor, except over the corridors.

Joists for the first floor of the master's and mistress's houses 10 inches × 2½ inches, trimming joists 10 inches × 3 inches, and 1 tier of herring-bone strutting between the walls in each room. The timber floors on the ground story are to have sound ship-oak joists 5 inches × 3 inches, and sleepers 4½ inches × 3 inches, securely spiked and bedded.

The floors of the closets on the first and second floors are to have fir joists 6 inches × 2½ inches, and wall plates 4 inches × 3½ inches.

Filletings.—All floors throughout on the first and second stories are to be filleted, sound boarded with ¾-inch deal, and pugged with proper *pugging* 1 inch thick.

Quarter Partitions.—On the several stories to be formed with heads, sills, door, and principal posts, 4 inches × 4 inches, braces 4 inches × 3 inches, quarters 4 inches × 2½ inches, to be securely framed and trussed where requisite with all necessary ironwork. Wherever the sills have long bearings, they are to be increased to a sufficient scantling to insure firmness and stability.

The partitions A and B on two-pair floors to be constructed as shown on detail drawing, with ironwork complete.

Cisterns.—The cisterns over washing-rooms 2 pair to have joists 8 inches × 3 inches, plates 5 inches × 4 inches, heads and sills to divisions 6 inches × 4 inches, quarters 4 inches × 3 inches. Line the bottom with 1¼-inch rough boarding, edges shot; line the sides formed by quarter partitions with inch rough boarding for lead, edges shot, with rounded rolls. The cisterns over clothes' depots, urinals, and water-closet wings, to have similar joists, plates, and boarding.

The *cisterns* over water-closets, master's, and matron's apartments, to have joists 6 inches × 2½ inches, plates 4 inches × 3½ inches, and similar boarding.

Provide and fix over each of the water-closets of wings of ground and one-pair floors *cisterns* formed of 1½-inch deal, 1 side ploughed and tongued bottoms, and 1½-inch deal 1 side, and dovetailed sides, on fir bearers 4 inches × 3 inches, cut and pinned into wall; line the fronts and soffits with ¾-inch deal matched and beaded linings, and form a small door in each for access to cisterns, with 2½-inch butts and brass knob turnbuckles.

Fir flitches to all girders 9 inches × 3 inches, bolted with ¾-inch wrought-iron bolts for support of walls which may project below ceiling, with deal framed bracketing, secured to same for plastering.

Bracketings of 1½-inch deal for cornices, &c., wherever required, with stout rough fillets secured with wall-hooks where necessary; also all centring for arches, trimmers, and apertures, and moulds for inverts, springing pieces for trimmers, &c., and cut all holes for and attend upon plumbers and other tradesmen wherever required.

Provide an office for the Clerk of the Works, with deal floor, stove and flue, glazed sashes, desk with drawer, and lock on ditto, stool, &c., complete; also for warming and lighting same, and maintain the whole until completion, and then clear away.

The Contractor to provide for *temporary enclosures* to the apertures and for any enclosures to the ground, which he may require for his own purposes.

Provisions.—To be deducted if not used at the prices affixed.

	£	*s.*	*d.*
500 feet cube fir framed in scantling sizes, at per foot cube			
100 days carpenter, at per day . . .			

JOINER AND IRONMONGER.

Floors.—Lay all the wood floors on the ground, first and second stories with 1¼-inch yellow battens, ploughed and tongued with iron, and with ploughed and tongued heading joints with mitred borders round all slabs. The floors of washing-rooms and urinals to have 1¼-inch floor as described, but rough to receive lead covering, hereafter described.

Skirt all rooms and passages, unless otherwise described, with 1¼-inch torus moulded skirting 9 inches wide, with proper grounds and backings.

TWO-PAIR STORY.

The *external windows* to have 2-inch deal lamb's-tongue folding casement sashes, and solid rebated double-beaded and grooved frames, 4 inches × 3 inches, and proper oak sills, with hook-metal water-bar let into groove in sill, and bedded in red-lead cement. The upper part of the sashes fixed, and the lower hung, folding with strong 2½-inch wrought-iron butts, and fastened with 6-inch brass flush bolt to one casement, and strong brass casement fastening, of the prime-cost value of 3*s.* 6*d.*, to the other; the meeting joints of casements to have astragal 1½ inch × ¾ inch, planted on, and the bottom rails to have moulded weather boards, 2½ inches × 2 inches, throated and fixed with screws, and each casement to have strong 12-inch brass hook-and-eye fastening to keep them open; 1¼-inch tongued and rounded window nosing grooved for plaster.

N.B.—The jambs, soffits, and window backs, are to be worked in cement, as described in Plasterer's work.

The *internal windows* are to have solid frames, as before described, but ¾ inch × 2½ inches, and 1½-inch lamb's-tongue sashes fixed, and to correspond with external sashes, with 1¼-inch tongued and rounded nosing, and beaded stops round.

The *windows* of water-closets and urinals to have 1¼-inch tongued and rounded window board and bearers.

Bold angle staff-beads to all angles of all the window jambs and piers of recesses and chimney-breasts, the circular heads to have cement angle beads, as hereafter described in Plasterer's work.

The *doorways* to have 1¼-inch single rebated jambs and soffits, with a bold architrave moulding on both sides to cover the plaster joint.

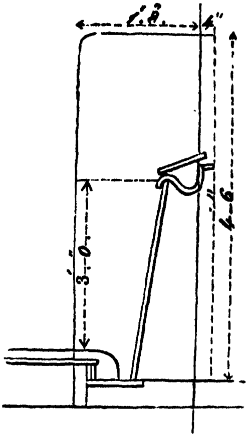
1½-inch, 4-panel square *doors* hung with 3-inch wrought-iron *butts*, and furnished with best 7-inch iron-rim knob *locks*, with plain brass furniture; the doors of water-closets to have brass pulpit *latches* in lieu of locks, and 4-inch brass-necked bolts.

The *doorway* from passage to washing-room to have door and fastenings as to other rooms, and 1½-inch lamb's-tongue, fixed side lights, with square framing under, and 2-inch lamb's-tongue fan-light, with segment head, 1½-inch rebated and double-beaded jambs, and fir proper mullions and transoms, 4 inches × 2½ inches.

The *water-closets* to be fitted up with 1¼-inch clean deal seats and risers, and inch clamped and mitred flaps and beaded frames, rounded nosings, the flaps hung with 2½-inch brass butts; cut proper holes in seat, the seats and risers to be made so as to be easily removed without injury.

¾-inch deal square skirtings 4½ inches wide, and narrow grounds round seats, and inch-square skirting 7 inches wide, and ditto next floor of water-closets.

¾-inch deal beaded pipe casing, fixed with gilt-headed screws, and proper rebated grounds for ditto to each closet.



The *urinals* to be fitted up with ¾-inch rubbed slate divisions and backs as per sketch; the divisions to be securely pinned into the wall 4 inches, and to project 1 foot 8 inches from the wall, grooved to receive the backs; a stout 4-inch copper trough the whole length of the urinals, with stopped ends, fixed perfectly level, the back edge to stand an inch higher than the front edge, and to be pinned an inch into the wall; the front edge to be dressed down as a lip 1 inch over the edge of the slate back, which is to be properly blocked out to the inclination shown; the divisions to be notched out to receive the copper trough cover, the trough with a narrow piece of ¾-inch slate, pinned into the wall, with ½-inch space between the slate and the copper lip, to allow the water to pass over the lip, the slate to project an inch in front of the back of the urinals. At the bottom of the urinals is to be formed a ¾-inch rubbed slate trough 9 inches wide, into the bottom of which the back of the urinal is to be tongued to form one side, the front of the trough to stand 4 inches high, tongued into the bottom; insert at the end next the water-closets a 4-inch bell trap with brass grate, and 3-inch lead waste pipe made good into the soil-pipe of the closets.

Skirt washing-rooms and urinals with ¾-inch rubbed slate skirting 9 inches high, fixed with screws and plugs complete.

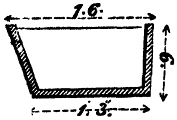
Cover the floor of the urinal-rooms with 5-lb. milled lead dressed up 2 inches round 3 sides of the rooms, and over the front of the slate trough 2 inches, with proper soldered angles, and dots where requisite.

At each end of the urinals, slates precisely similar to the divisions are to be fixed.

The *surface* of the lead floors of the urinal-rooms is to be 2 inches lower than the surface of the floors of the dormitories, and on the lead 2-inch deal gratings are to be provided and fixed, made with 2-inch square spaces.

The *floor of the washing-room* is to be formed, covered with lead and wood gratings, precisely similar to those of the urinal-rooms, except that the trough is to be lined with similar lead instead of formed with slate.

The *washing-troughs* to be fitted up with 1¼-inch deal sides,



bottoms, ends, and divisions, as per sketch; the whole grooved, tongued, and put together with white lead, nuts and screws, and fixed on wrought bearers 4 inches × 2½ inches, pinned 4 inches into the wall, one bearer under each division.

Cut all holes and attend upon plumbers as required.

FIRST FLOOR.

The floors and skirtings to be as before described.

The *windows* on this story are to be finished, as described to the floor above, except that the windows of water-closets are to have sashes hung on pivots, with proper lines, hooks-and-eyes, and brass button fastenings, and inch-tongued linings with moulding round as to doors.

The *doorways* to have 2 inch 4-panel square doors with fastenings, jambs, and mouldings, as described to the floor above, except that the jambs of the doors in walls, more than 9 inches thick, are to be 1½ inch thick, and framed square in 3 panels the set.

The *sashes* in partitions of Nurses' rooms to be 2-inch lamb's-tongue, fixed with 1¼-inch rebated jambs, and bold quirk OG, and bead moulding round both sides, and a metal casement and frame 2 feet × 1 foot 3 inches, with hinges and brass fastenings complete, of best description, to be fixed in each sash.

The *semicircular window* in the centre of the building next the entrance hall to be formed with sash frames 4 inches × 3 inches, and oak sills as before described; each compartment between the mullions to have a complete frame with oak sill, mullions 4 inches × 3 inches securely fixed, and 1¼-inch external and internal linings in front of same, 2½-inch folding casements and fixed heads to match, as to the other windows on this story, but to have *espagniolette fastenings* with blank head.

The *water-closets* to be fitted up and finished as those on the story above, except that the skirtings are to be beaded and 4 inches wide.

The *washing-troughs* to be as described to the story above.

Housemaids' Closets.—Provide and fit up in the Housemaids' closets the whole width 1¼-inch framed and beaded dwarf closet fronts and square framed folding-doors hung with 3-inch butts, and furnished with strong brass knob latches and bolt inside; 1¼-inch deal top, except the portion shown as sink, which is to be formed 8 inches deep, of 1¼-inch deal, dovetailed and fixed on strong bearers, and to have 1¼-inch deal beaded frame and mortice clamped flap, hung with 2½-inch brass butts in each closet; fix a shelf the whole length and width of inch deal and bearers; skirt round top of closet with ¾-inch beaded skirting 4 inches wide, and narrow grounds.

GROUND STORY.

The *floors and skirtings* to be the same as those described to the stories above, except that the servants' hall will have inch square skirting 9 inches wide, and that there will be no wood skirtings to any paved portions.

All the external windows, except where otherwise described, to have solid sash frames with oak sills, casement sashes, linings, window boards, and fastenings complete as the stories above; but the nosings to be extra wide, and to have moulding under same.

The *windows of lobbies* by water-closets to have fir frames as before, but 5 inches × 4 inches, and oak sills 5 inches × 3½ inches, 2½-inch lamb's-tongue fixed sashes, with a metal casement 4 feet 3 inches × 2 feet 4 inches, hinges, fastenings, &c. complete of best description to each.

All *external doorways*, except to the front entrance and entrances next wings, to have fir solid rebated and beaded frames, 4 inches × 3 inches, tenoned into the stone steps, with circular heads and transom rails where so shown, 2 inch 4-panel bold bead flush and square doors, hung with 4-inch butts, and furnished with good 8-inch dead locks. Norfolk latches, and two 10-inch barrel bolts to each door. The fanlights to be 2-inch lamb's-tongue.

The *entrance doors* next wings to be the same as above described, but double margined, and the doorcases 4 inches × 4 inches.

Inch-tongued linings and bold quirk OG, and bead mouldings where required.

The *front entrance doorway* to have fir solid rebated and bold beaded frame 6 inches × 4 inches, tenoned into stone landings with circular head, 2½-inch 6-panel bold bolection, moulded both sides and rebated folding-doors, with 2-inch panelled circular head above the doors, *fixed* to correspond externally with the doors; each door to be hung with three 4-inch butt hinges, furnished with one 10-inch and one 30-inch barrel bolt, the bottom bolts to drop into sockets let into the stone landings. A good 12-inch iron drawback lock is also to be fixed to one of the doors, and strong japanned barrel door chain and runner.

The *two doorways* from the entrance hall to the corridors to have 1½-inch double-rebated and bold staff-beaded linings, 2-inch double-moulded folding sash doors hung with 4-inch butts; one door furnished with a 10-inch and a 21-inch brass flush bolt and proper sockets, and the other to have a 7-inch mortice lock and plain brass furniture.

The *doorway* from the entrance hall to the dining-hall to have doors similar to those last described, but the frame to be fir solid double-rebated and beaded 6 inches × 4 inches, tenoned into the stone landing, the hinges and fastenings to be precisely similar.

The *two doorways* at each end of the dining-hall are to be formed as shown in the drawings, with frame 5 inches × 4 inches, as before described, continued over the side-lights, and pinned securely into the wall at each end; the doors to be framed in a similar manner to those last described, and furnished with similar hinges and fastenings, except that they will have 30-inch instead of 21-inch flush bolts; inch-framed skeleton grounds properly blocked, and 1¼-inch pilasters, the returns tongued into the door-frames; deal moulded caps, cornices, and bases on both sides. The framing of the side lights to be bead flush both sides, with 2-inch lamb's-tongue sashes over, and proper fir sill 6 inches × 3 inches, with quirk OG and bead moulding on both sides, and to be properly fixed with moulded skirting; the semicircular-headed sashes above the doors to be 2-inch deal lamb's-tongue moulded, with proper fir frames and transoms 5 inches × 3 inches.

The *internal doorways* to the several rooms and passages are to have 1¼-inch double-rebated and beaded jambs, 2-inch 4-panel double-moulded doors, hung with 4-inch butts, and furnished with 7-inch mortice locks and plain brass furniture. Inch-framed and splayed grounds 4 inches wide, and bold architrave moulding on each side to cover the joints of the plastering.

The *sham doors* or slides in the dining-hall next the kitchen are to be 1½-inch deal panelled and moulded on one side, and bead butt the other; the slides to be hung at top with brass wheels and rails, and to be fastened with 6-inch strong brass flush bolts, and to have strong brass sunk flush handles; the framing under the slides to be fixed, 1¼-inch beaded both edges, jamb linings next the hall. Inch-framed grounds 4½ inches wide, and architraves are to be fixed round the openings. The slides to act in the most perfect manner with the requisite grooves, wainscot sill with copper slide in the same, metal tram bar rounded, and to have 4 brass rollers, of the prime-cost value of 3*s.* 6*d.* each.

The *several doorways* in the kitchen, scullery, and boiler-room departments, except the coal and potato stores and larder, are to have 1¼-inch single-rebated jambs, with quirk OG and bead on both sides, and 2-inch 4-panel square framed doors, hung with 4-inch butts, and furnished with 7-inch iron-rim spring locks and plain brass furniture; the doors next the master's and matron's apartments to be moulded on that side, and to have 1½-inch double-rebated and rounded jambs, framed in 5 square panels the set and inch-framed grounds on one side.

Windows.—In the Master's and Matron's apartments, Schoolmistress's room, and Porter's rooms on this floor, the windows are to have boxing shutters with 1¼-inch proper boxings, and ¾-inch beaded return linings, architrave mouldings to correspond with the doors; 1¼-inch bead butt back linings, 1¼-inch panelled and moulded front shutters prepared to cut, and 1¼-inch bead butt and square back flaps; 1¼-inch panelled and moulded soffits, backs and elbows, with beaded capping; the front shutters hung with 2½-inch butts, and to have brass knobs and roses; the back flaps hung with 2-inch back flap hinges, good 24-inch spring bar shutter fastenings.

A *dresser* to be provided and fitted up in the scullery, as shown, with 2-inch deal top, framed legs and rails, beaded 3 inches square. No. 5 deal drawers, with inch fronts, ¾-inch sides, backs, and bottoms, rebated sliders, and turned drawer handles. Inch-deal pot-board and risers, with proper bearers; provide and fix above the dresser 3 sunk shelves, housed into 1¼-inch cut standards, with fascia at top; line the back, under and above the dresser, with ⅝-inch matched and beaded linings.

Another *dresser* to be fitted up also in the scullery, top with framed legs and rails, as last, and pot-board and riser; but in the centre form a *sink* the size shown, with 1¼-inch deal, 8 inches deep, on stout bearers, the sink to be lined with 7-lb. milled lead to turn 1½-inch over the front edge, and copper nailed down to the dresser on each side in a rebate, and to have 5-lb. milled lead flashing, 18 inches wide, at back, for which purpose a 1¼-inch deal lining is to be fixed to receive it flush with the plastering, the deal lining to be continued the length of the dresser on each side.

Fittings.—Provide the sum of 25*l.* for other fittings in the passages on either side of the scullery, to be formed as may be directed, and if not directed to be formed, that sum will be deducted from the amount of the contract.

The *doorways* to the larder, coal, and potato stores, and to the passages adjoining, are to have fir proper doorcases, 4 inches × 3 inches, tenoned into the paving.

1½-inch, 4-panel bead flush and square framed *doors*, hung with 4-inch butts, and furnished with good 7-inch iron-rim brass-knob locks, with quirk OG on one side.

Girls' water-closets to be fitted up as described to the story above.

All projecting angles internally to have bold staff-beads.

The *sashes* between the schoolmistress's room and girls' schoolroom are to be 2-inch deal lamb's tongue, fixed with staff-beaded linings round the opening and window boards.

All *external doorways* where required to have proper inch-deal *internal* linings round the openings. All circular *fanlights* over external and other openings of doorways to have *fixed sashes* to correspond with the remaining sashes.

The *Boys' urinals* to be fitted up with slate divisions, backs, copper trough, and slate trough at bottom, &c., as described to the stories above.

The *Boys' water-closets* to be formed as shown, with wrought framed and beaded posts, and heads and oak sills 4 inches × 4 inches, grooved to receive 1½-inch tongued and beaded divisions, and ¾-inch matched and beaded boarding in very narrow widths, and circular backings to form back; 1½-inch framed and beaded fronts; 1½-inch, 4-panel bead flush and square framed doors 5 feet high, with ¾-inch wrought and chamfered stops hung with 4-inch butts, and furnished with a 6-inch necked bolt inside. The cistern at top also to be formed with 1½-inch deal, dovetailed and tongued, and four 1¼-inch divisions, and ½-inch iron rod bolt at each angle with nuts and washers.

The *cistern* to have 1¼-inch bead flush and square panelled fronts, with beaded capping; inch tongued beaded and ledged cover, and beaded frame with flap in each division, hung with 18-inch cross-garnet hinges. A flap is also to be formed over the space between the backs of the closets.

The *closets* to be fitted up with clean deal seat and risers, flaps, and frames complete, as described to the other water-closets. The Girls' water-closets to be also fitted up in a similar manner.

The *three Venetian windows* to the kitchen department to have deal cased frames, oak double sunk sills, 1½-inch pulley-pieces with brass axle pulleys; 2-inch lamb's-tongue sashes, the middle sashes of each window double hung with best patent lines and iron weights, the side lights fixed, the lower sashes of each window to be opened and closed from below by means of strong iron pulleys and patent lines, with a strong iron hook and ring to secure each line at bottom.

Inch tongued linings, and 1¼-inch tongued and rounded window boards and bearers.

The *windows* to the larder and coal and potato stores to have deal-cased frames, oak sunk sills, 1¼-inch deal pulley pieces and brass axle pulleys, 1½-inch ovolo sashes double hung with patent lines, brass axle pulleys, and iron weights and brass spring roller sash fastening, and to have inch-rounded linings and window boards as last described.

The *skylights* over kitchen department to be 2½-inch deal ovolo moulded, with 1½-inch deal wrought lining, tongued at angles, and staff-bead tongued on edge.

Provide and fix to separate the Boys' and Girls' dining-rooms a 2-inch deal panelled and double-moulded partition, 2 panels high, with ovolo plinth and bold OG capping on both sides, to be the height of the astragal moulding against the walls, and made in compartments to shift, with proper studs to secure them, and the whole fixed with very strong wrought-iron standard L brackets, 10 on each side, 4 feet each way, securely screwed with strong thumb-screws, and plates to the partition and floor.

The *washing-troughs* on this floor to be fitted up as described to the floor above, and form a closet where shown with 1¼-inch framed and beaded front, and 1-panel bead butt and square door, hung with 3-inch butts, and secured with brass button on plate; ¾-inch chamfered stop to door.

Inch closet top, cross tongued and bearers, and inch shelf and chamfered bearers.

The *handrail* of staircase and galleries to be Honduras mahogany, moulded out of 3 inches × 2 inches, with the requisite ramps, scrolls, &c., secured at joints with handrail screws and wax polished.

BASEMENT.

The *doors* from areas to be 2-inch deal, 4-panel bead butt and square hung with 4-inch butts, and furnished with best 8-inch dead locks and Norfolk thumb-latches. Fir proper doorcases 4 inches × 4 inches, tenoned into stone, and 5/4-inch wrought and chamfered fillet round scribed to brickwork.

Provision.—Provide the sum of 20*l.* for closets, shelves, &c., in rooms, ground-story, beyond those described, to be deducted if not required.

PLASTERER.

SECOND FLOOR.

All lathing in this and other stories to be lath and half work. Lath, plaster, flote, set and twice white the ceilings.

Lath, plaster, flote, and set the partitions to within 4 feet of the floor.

Render, flote, and set the walls to within 4 feet of the floor.

To the height of 4 feet from the floor, lath and finish with Roman cement to a fine surface all the partitions with a bold quirk bead on the top at the junction with the plastering.

To the same height from the floor, render and finish with a fine surface in Roman cement all the walls with a bold quirk bead at the junction of the plastering, and cut quirk to all angles on both sides of the staff-beads.

All the *window backs and jambs* to be rendered with Roman cement to a fine surface to the height of 4 feet.

Render with Parian cement to a fine surface the jambs and soffits of the windows and recesses above the Roman cement already described; cut quirks on both sides of the staff-beads, and run large staff-bead and double quirk to all the circular heads.

FIRST FLOOR.

To be finished as described to the story above, except the Master's and Matron's apartments, water-closets, and Housemaids' closets, where, instead of Roman cement, plastering is to be used; the spandrils and window backs in the Master's and Matron's apartments are to be Parian cement, as well as the jambs, &c., and the walls and partitions prepared for paper.

A small plain cornice 6 inches girth is to be formed on the ceilings in the Master's and Matron's apartments, and whitened.

GROUND FLOOR.

Lath, plaster, flote, set, and twice white all the ceilings.

Lath, plaster, flote, and set the quarter partitions; where next the passages they are to be finished with Roman cement as described to the story above. The walls of the Girls' work-rooms, corridors, school-room, Schoolmistress's room, Porters' rooms, closets, water-closets and lobbies, to be finished as described to the story above; also the window back jambs and circular soffits of the windows, the windows of the Master's and Matron's apartments, Schoolmistress's room, and Porters' room, will not have any plastering, being fitted with shutters, &c.

The walls of the committee-room are to be finished with trowelled stucco for paint, a neat cornice 18 inches girth, and whitening to be run on the ceiling of this room, and 12 inches girth on the Master's and Matron's rooms.

Entrance Hall.—Form the coffered ceiling and run the several cornices in plaster as shown, and whiten same, and render, flote and set finished with trowelled stucco (for paint) the whole of the walls. The pilasters with moulded caps and bases, as shown to opening between gallery and dining-hall, to be worked in Parian cement, smooth for paint. Run a moulded skirting 12 inches high, the moulding 4 inches girth in Parian cement on ground-story, and dub out for same.

Dining-hall.—To the height of 4 feet above the floor, the walls are to be rendered with Roman cement to a fine smooth surface and finished with a bold quirk bead at top, and from thence to the main cornice to be rendered, floted, set, and finished with trowelled stucco for paint. Run the several mouldings on the same to form panels as shown, also the quirk flush beads to form the small panels, and run the several cornices also as shown ; above the main cornice the lean to ceiling and the lanternlight are to be lathed, plastered, floted, set, and twice whitened, the cornices and mouldings to form panels, run as shown, the panels in the lantern to be formed with bold quirk flush bead.

Staircase.—To the height of 4 feet above the steps and landings of the stairs and ground-floor, the walls are to be rendered with Roman cement to as fine a surface as possible, and finished with a bold quirk bead at top, and a similar bead as skirting on the stairs and landings.

All projecting angles to have bold staff-beads. The ceiling, cornices, and panels, to be as described to the dining-hall, and as shown on the drawings.

The kitchen department and Servants' hall, boiler-room, larder, scullery, &c., to be finished with plastering and Roman cement, as described to the school-rooms, with Parian cement, jambs, and soffits, to openings and recesses and staff-beads.

The urinal-room, and knife and shoe-room, are to have plastered ceilings, but no plastering on the walls.

The coal and potato stores are not to have any plastering.

The arched ceiling of larder to be rendered, floted, and twice lime-whited.

Pug with lime and hair between the joists all the floors, where described to have sound boarding in the Carpenter's work.

Form all arrisses, cut all quirks, and finish the whole in the very best manner.

Externally.—Dub out with tiles and cement where necessary, and form the rustics, plain faces, moulded caps, bases, and architraves, cornices to ground-floor windows, and consoles for ditto, keystones, string courses cantilevers under ditto ; chimney-shafts (except the heads) as indicated by the drawings, with best Portland cement, executed in a superior manner, and jointed to imitate stone (excepting also the keystone and City Arms in the front, and the balusters and capping on the same, and the pedestals and principal cornice and cantilevers under the same, which are not to be in cement).

SLATER.

Cover all the roofs with best Duchess slates to a 3-inch lap, with 2 copper nails to each slate effectually to exclude the wet in every part, and should any unsound or broken slates appear after completion of the works, they are to be taken out and new sound slates properly inserted.

Provide and execute the Slater's work to the *urinals* and *washing-rooms*, as before described in Joiner's work.

SMITH.

Provide a chimney-bar of wrought iron 2½ inches × ½ inch for each opening of fire-places, and cradle bars wherever required for carrying over the several flues, &c.

Provide the *hoop iron bond* described in the Bricklayer's work.

Provide the *air gratings* also described.

Provide the wrought and cast iron described in the Carpenter's and Joiner's works.

Bold cast-iron ornamental newels for staircases, and 2 light cast-iron ornamental *balusters* to each step, to the prime-cost value of 3*s.* 6*d.* each; continue the balusters the same distance apart round all the landings and well-holes, the balusters to be screwed to the handrails, and run with lead into the steps. The balusters round gallery of entrance hall and dining-hall to be similar.

A *railing* to be provided and fixed complete round back areas, of the prime-cost value of 4s. per foot lineal, also a gate in same with hinges, lock, &c., complete, of the prime-cost value of 50s.

Wrought-iron framed guards to windows of larder, coal-stores, &c., formed with top and bottom rails, 2 inches × ½ inch, cut and pinned into reveals, and ¾-inch round guard bars, 4 inches apart.

Eaves' Gutters and Pipes.—Provide and fix to all eaves of the roofs, as shown on the plans, 5-inch strong cast-iron eaves' gutters, with strong wrought-iron brackets and stacks of 4½-inch, cast-iron rain-water pipes with proper heads, the pipes to be continued and made good into the drains.

Skylights.—Provide and fix strong *wrought-iron* moulded framed and rebated bar skylights, with wrought-iron head pieces to match, well made and securely fixed with screws, and countersunk holes over the dining-hall and staircases; the bars to dining-hall to be 2½ inches deep and ¾ inch thick, and head-piece 2½ inches wide and ⅝ inch thick, the bars to staircase to be 2 inches deep and ⅝-inch thick, and head-piece 2 inches wide and ¼ inch thick.

No. 4 *cast-iron girders* as springers for arches over the coal-stores in basement, 1¼ inch thick, 8 inches deep (between the flanges), bottom flanges 7 inches wide, top ditto 2½ inches wide.

No. 2 *cast-iron girders* 1¼ inch thick, 5 inches deep (between flanges), top and bottom flanges 4 inches wide to carry the plain-tile roof over the larder.

No. 2 *cast-iron girders* 1 inch thick, 12 inches deep (between flanges), top and bottom flanges 4½ inches wide, to carry walls between clothes-stores and hall on one-pair over corridor.

No. 4 *girders* 1¼ inch thick, 10 inches deep between flanges, top and bottom flanges 7 inches wide, to carry walls of front building over porters' rooms.

All the *girders to be proved* in the presence of the Architect with such a weight as he may deem necessary, and all to have wall-bearings and pieces of 8-lb. lead between same and stone templates.

Provide *patterns* for all girders and other ironwork, wherever required.

Provision.—Provide, to be deducted if not required, 44cwt. 1qr. 21lbs. cast-iron in flanged girders to carry wall over opening between gallery of hall and dining-room, also a pattern for same 22 feet long, 13 inches deep, and 1¼ inch thick.

200lbs. wrought-iron in straps, bolts, &c., fixed complete.

Provision.—The Contractor is also to provide in estimate the sum of 400*l.* for the iron eaves cornice and brackets to main building, to be supplied and fixed by Mr. Walker, and which sum of 400*l.* he is to pay to Mr. Walker on the receipt of an order from the Architect, or allow the said amount as a deduction from the amount of the contract.

PLUMBER.

The *lead* to be the best WB milled lead, and all to be done in the best manner, and secured with solder, dots, tacks, lead-headed nails, and holdfasts, &c.

Gutters and flats to be laid with 7-lb. milled lead, to turn up 10 inches under the slates and 6 inches against the brickwork, and fix flashings of 5-lb. lead, 6 inches wide, pinned into the joints of the brickwork, secured with wall-hooks, and well pointed with cement. On the lead flats the lead is to be turned completely over the rolls, properly dressed down and secured. Cover the upright sides of lantern with 6-lb. lead, with flashing top and bottom of 5-lb. lead.

The *hips and ridges* of the several roofs to be covered with 6-lb. milled lead, 20 inches wide, and valley 30 inches wide, properly dressed down and secured with lead-headed nails. The flashings to be stepped where requisite.

The *several cisterns* throughout the building to be lined with 6-lb. milled lead sides and 8-lb. bottoms, with proper soldered angles. The upright sides of flat over Boys' washing-room to be lined with 5-lb. milled lead, and provide and fix proper lead service boxes.

In all deal cisterns the lead is to turn an inch over the top, properly secured with copper nails. Where the cisterns have brick enclosures, the lead is to be pinned into the joints within 6 inches of the top, pointed with cement and secured with wall-hooks.

All *deal sinks* are to be lined with 7-lb. milled lead, to turn an inch over the top, and nailed down with copper nails.

Lay on water from present main in Shepherd's Lane to end wall of entrance hall, with 3-inch cast-iron pipe, with socket joints run with lead, with brass coburg to main in lane, and excavate for same, and well ram the earth afterwards.

Lay 2-inch strong lead service pipe from iron main along corridor, with brass coburg and joints.

Lay on water to each cistern from 2-inch lead service, with 1½-inch strong lead service pipes with proper joints, and securely fixed with strong galvanized iron holdfasts; 1½-inch strong Dann's patent brass ball valves, with large strong copper balls and bosses, 2-inch strong lead waste pipes from the bottom of the cisterns, to be made good into the soil-pipe of the water-closets where over the water-closets, and where not the waste pipes are to be carried into the drains; trumpet-mouthed standing wastes also in the cisterns, properly and securely fixed with brass washers and wastes.

Lay on water from the large to the small cisterns with inch service pipes and inch Dann's patent brass ball valves, with strong copper balls and bosses; 1½-inch standing wastes in the cisterns continued and made good into the soil-pipes, with brass washer and wastes complete. From these cisterns lay on water to each water-closet pan, with ¾-inch lead service pipes, the water to flow on the opening of each closet door, for which purpose the requisite apparatus is to be provided and fixed to the satisfaction of the Architect, with proper lead service boxes, &c. complete. ¾-inch lead service pipes to all sinks, with brass cocks.

1½-inch service from the large cisterns the whole length of the lavatories, with a ¾-inch brass cock to each division; 2½-inch waste pipes from all sinks and lavatories, with bell traps and brass gratings.

2-inch branch wastes from lavatories into horizontal wastes, and 2-inch brass washers, plugs and chains; 4½-inch lead soil-pipes out of 8-lb. lead, and 4-lb. milled lead safes to the closets.

All the *water-closets*, except the master's and matron's, to be fitted up with the most approved stoneware basins and traps, and the soil-pipes are to be properly connected therewith. The Master's and Matron's water-closets to have best pan apparatus and white basins complete, and D traps of 8-lb. lead.

Inch service to baths, with inch stop cock to each.

Inch service to boiler-room, with inch bib cock.

Provide and fix complete the plumber's work to the *urinals, lavatories*, and *bath-rooms* already described in the Joiner's work; also the lead seatings for the iron girders described in Smith's work.

The whole of the *cocks* to be brass, with round waterways and screw bosses.

Provision.—Provide, to be deducted if not required, 200 feet run 2-inch strong lead pipe, including joints and fixing complete.

GLAZIER.

All the sashes throughout the front of the building, and the doors from entrance hall to corridor and dining-hall, and the doors and fanlights each end of dining-hall, to be glazed with Chance's best flattened 21 oz. sheet-glass, and the remaining sashes and doors, fanlights, &c., inside and outside of the building, with 16 oz. ditto.

The squares in doors and fanlights, where too large to be in one, to be ground at the joints and fitted in the most accurate manner.

All the *skylights* to be glazed with rough plate glass, ¼ inch thick, ground on one side, each square the whole length between the bars, and free from blemishes.

To clean all the glass, and leave the same perfect at the completion of the works

PAINTER AND PAPERHANGER.

To twice distemper a cream tint the whole of the plastered sides throughout, except master's and matron's apartments, on ground and one-pair, committee-room, entrance hall, dining-hall, and staircases, which are to be painted 4 times in oil and flatted a tint, and excepting master's and matron's apartments on one-pair, which are to be papered with paper of the prime-cost value of 3*d.* per yard, and cut close to every part.

The whole of the wood and ironwork usually painted both outside and inside, to be painted 4 times in oil.

Grained Work.—To plain grain wainscot and twice varnish in copal the whole of the internal and external woodwork, except the windows of kitchen departments.

The *iron girders* to be painted 3 times in oil.

To paint 4 times in oil and sanded the iron principal eaves, cornice and brackets to main front building.

All the work to be properly prepared and twice knotted, and the whole of the materials to be of the very best description.

GENERAL CONDITIONS.

The whole of the works described in this specification, and the drawings herein referred to, are to be executed to the entire satisfaction of the Freemen's Orphan School Committee and their Architect; and the Contractor is to find, provide, fix, and perform, with the best materials of their several kinds, all and every part of the works which are specified, represented, intended, or implied, either particularly or generally, in this specification, and in the drawings herein referred to, and such other drawings as may be given at large by the said Architect, and such verbal or written instructions as he may give during the progress of the works; and should any works be described in this specification, which are not, or could not be, represented in the drawings, or should any works be represented in, or be reasonably implied by, the drawings which are not mentioned in the specification or described therein, the several works are in either case to be done: and nothing is to be omitted, which is requisite to render every portion of the works completely finished and fit for the purposes required, as all works which are requisite are to be considered as included in the contract, unless a specific agreement at the option of the Committee aforesaid should be at any time made in writing to allow the Contractor a greater or less sum of money on account of any deviation from lessening or addition to the quantity or quality of the several works.

In case the frost should set in during the progress of the works they are to be carefully covered up by the Contractor with straw and boards, and any injury done to the works either by the frost or from any other cause whatever during their execution, is to be made good by the Contractor at his own expense to the satisfaction of the Architect, and the building is to be delivered up to the Committee aforesaid by the Contractor, complete and perfect in every respect, agreeably to the terms of the contract, on or before the 29th day of September, 1852.

It is to be distinctly understood that upon all points connected with the contract the decision of the Architect is to be final and conclusive between the Committee and the Contractor. The Contractor is to insure the building to the extent of two-thirds of its cost in some office to be approved by the Architect.

The money is to be paid by instalments on the Architect's certificate in the proportion of 90 per cent. on the value of the work done in comparison with the amount of the contract, and the balance on his certificate of the due completion of the works agreeably with the terms of the contract.

The tenders are to be delivered at the Office of Works, Guildhall, before one o'clock on Tuesday, 14th October, 1851, sealed and endorsed, *Tender for the Erection of an Orphan School at Brixton.*

These general conditions are binding, except so far as the same are modified by the contract.

Specification of the Several Works requisite in the Erection and Completion of the New Buildings for the HIGH SCHOOL OF EDINBURGH. THOMAS HAMILTON, *Architect.* 1826.

DIGGING.

THE tracks of foundations to be taken out until a safe and solid bearing is obtained, and to be made truly level transversely and longitudinally.

The spaces outside of exterior walls, from the under bed of foundations to the level of the surface, to be filled up with dry stone shivers.

All rubbish, &c., arising during the progress of the work, to be carted away by the Contractor.

MASON'S WORK.

The *drains* to be built of the sizes and in the several directions shown by the drawings. The sides to be of the best rubble 12 inches thick; and the soles and covers to be at least 10 inches wider than their respective drains, and each to be 7 inches thick; the former to be wrought to a hollow in the centre, as shown by the section, and laid close joint upon a bed of good rubble to the required declivities; the covers to be closely jointed, and laid in the manner shown by the section, and hard packed at the ends.

Cesspools, of the dimensions explained by the drawings, to be of best rubble work, finished with Roman cement, having droved bottoms, tongues, and covers, and each having an opening 18 inches square, with plug and 2 strong iron rings. The drain or tank immediately adjoining the Boys' necessaries to be 3½ feet deep, and 2½ feet wide, finished inside with Roman cement, and made perfectly water tight, having a plug or sluice for discharging into the principal drain, with which it is to be united.

The *foundations* to spread in the manner shown in the drawings, and the scaresments to consist of large flat equal bedded stones, averaging 9 inches in thickness. The superficial content of each not to be less than 10 feet or 12 feet, and to be laid cross bond on their natural beds, without any small packing but where absolutely necessary, and each course to run equal thickness throughout. The whole to be grouted up with thin lime, and otherwise completed in the most approved manner.

Rubble Work.—The exterior and interior walls to be built of the

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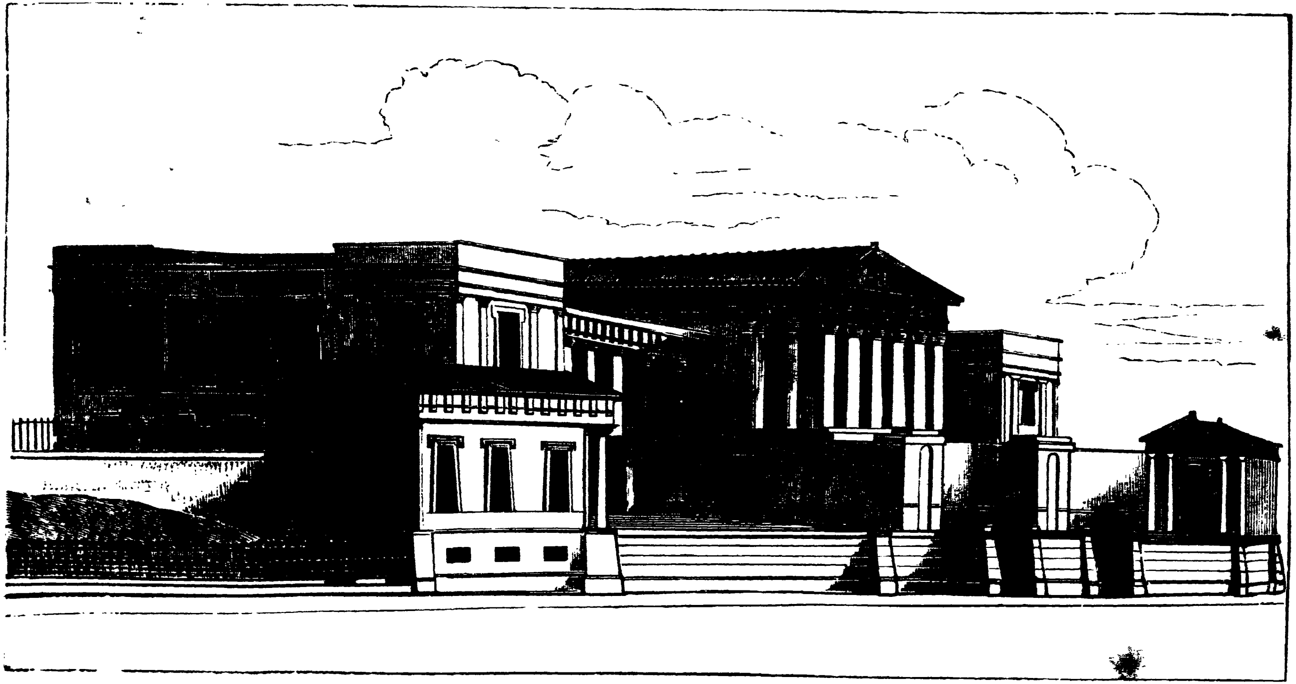


Elevation High School, Edinburgh.

several forms and dimensions shown by the drawings; discharging arches to be turned over safety lintels of windows, doors, &c., and all the rubble work, including retaining walls, bearing walls, dwarf walls, and others, as shown by the drawings, to be from Craigleith quarry, or at least of materials of equal quality, built cross bond, and laid on their natural and flat beds, flush, in properly prepared mortar, so as to require as little small packing as possible. The whole to be made level at the top of every fourth course of ashlar, grouted with thin well-made grout mortar, and finished flush with the upper bed before another course is begun.

The *whole front* of the main building, with its various projections and returns, together with the several mouldings, cornices, pilasters, columns, architraves, &c., to be of *polished ashlar*, with the exception of the recesses formed by the east and west corridors, which are to be neatly *brotched.*

East and West Fronts.—The several projecting cornices, pilasters, architraves, &c., of the east and west elevations to be *polished;* the mouldings in recesses to be droved, and the other parts of those fronts to be *brotched.*

North Front.—The pilasters, friezes, architraves, cornices, belts, fillets, and other mouldings of the north front, with its various projections, to be *droved;* the remaining parts of said front to be brotched in the neatest manner, having 45 stripes to each foot in height.

The *architraves,* as also the friezes and cornices (with their several enrichments) of the sides of the centre building, to be *polished.*

The cornices, friezes, and other projections of those parts of the wings, which are above level of platforms, and opposite to the east and west sides of the centre portico respectively, are to be *polished* —the remaining mouldings to be *droved.*

The other parts of the building, not more particularly described, to be *brotched,* having *droved mouldings,* &c.; and, in general, it is to be understood that those parts described to be droved, and also those parts described to be brotched, are to have droved mouldings. Upper bed of principal cornice all round to be droved.

The *Doric columns* to be of the best liver rock from *Craigleith Quarry,* or from such other of equal quality as may be approved of. They must also be free of every blemish, and selected with the greatest care in regard to quality of colour. Each column of the principal porch to be in 9 tambours or courses, without vertical joints, having their respective beds accurately worked throughout, and set with fine putty—all the details being executed in exact conformity to the drawings, or to such others as may be furnished during the progress of the work.

Arrisses and other parts of the flutings not to be fully worked until after the columns are built, so as to admit of the whole being finished in the most perfect manner, with a gentle swell or sweeping line, as may be directed.

Capitals of Columns.—The moulded part of the *capitals*, as also the abacus of each, to be of one stone. The steps, forming the plinths upon which the columns of the portico are placed, to be of the dimensions explained by the drawings, and to reach from centre to centre of each column, excepting those at the extremities of the portico, which are to extend to the outside of the angular columns, having the necessary projections, &c., as shown by the drawings.

The first *step or subplinth* to be of the required transverse dimensions; but the average lengths of the stones need not exceed half those of the courses immediately under the columns — each step to lap 3 inches over the step or plat immediately below it.

Architraves of Portico.—The transverse section of the architraves over columns to consist of 3 stones, each reaching from centre to centre of their respective columns, with the exception of those at the extremities, which are to extend over the angular columns, and to be otherwise finished according to the drawings.

The *principal cornice* to be in one thickness, and, with the mutules and other enrichments, as also the triglyphs and metopes of the frieze, projecting band, and drops of the architraves, to be worked in the most accurate and tradesmanlike manner, and laid with the utmost care and precision, so as to preserve the arrisses and minute details of the mouldings free from injury.

The *triglyphs* of the frieze to form headers, and, together with the metopes, to be built in the most approved manner. No stone of the cornice to be less than 4½ or 5 feet in length, and of such a breadth as to insure an average tail weight at least equal to double that of the projecting parts.

The *raking mouldings* to be executed according to the drawings. The stones at the extremities and apex of the pediments being each of sufficient thickness to include the upper member of the cornice, and also the acroteriæ, or small pedestals. The remaining parts of the upper member of said cornices to be formed of long stones checked or rebated into the cornice, as explained by the drawings. The beds and joints to be set with white lead, and the ends secured with strong copper dowels inserted into each.

The *ornaments* surmounting the cornice on each side to be neatly carved, according to the drawings or model, inserted into its upper bed with a dovetail check, and bedded with white lead.

East and West Colonnades. — The *moulded subplinths* of the columns of the corridors on each side of the main portico to be in 7 stones, each reaching from centre to centre of the columns; each column to be in 7 tambours or courses; each capital, including abacus, to be in 1 stone; the architraves over columns to be in 2 stones in thickness and 7 in length, as explained by the drawings, each reaching from centre to centre of the columns. The architrave, with its projecting band, as also the frieze and cornice, including the triglyphs and metopes, to be finished in the most approved manner, as described for the centre portico. The blocking course to be 1 stone in thickness, and in lengths not less than 4½ or 5 feet, so as to cross bond with the cornice.

The *pilasters* of the centre portico, as also those of the wings, to have no vertical joints, and to be in 8 courses each, independently of their bases and capitals; every alternate stone to be tailed at least 15 inches into the wall behind. It is also to be particularly understood, that each course of the pilasters shall be equal in height to 2 courses of ashlar.

The *courses* of the pilasters, at the extremities of the corridors, *to be of the same height*, and to range with those of the centre portico and wings.

All *vertical architraves of windows and doors* to be in 1 stone; each lintel to be in 1 stone, and the moulded archivolts of semicircular-headed windows to be worked and set with the most perfect accuracy. The panelled dado below windows to be each in 1 stone.

Architrave over pilasters of principal front of each wing to be in 3 lengths, sufficiently tailed into the wall, and of the breadth shown by the elevations, having the projecting band and drops worked upon it, and otherwise completed in the most approved manner. Architraves of east and west fronts to be also in 3 stones, and finished in a style corresponding with the principal front. The bases and capitals of pilasters to be each in 1 stone; and the various mouldings, not otherwise described, to be worked with the greatest accuracy, and laid in lengths suited to their respective purposes, so as to avoid all vertical joints which are not absolutely

The courses of the *pilasters of north front* (with the exception of those at the extreme angles) to be of the same height, and to range with the ashlar. The architraves over the same may also be in 2 courses—the other parts of said front, with its various projections and returns, being built in a corresponding style.

Ashlar specified to be droved may be of *Craigleith common rock*, providing it be of equal colour, and free of blemishes; but all the polished ashlar is particularly understood to be of Craigleith liver rock, and to average 9 inches thick; to be closely jointed, squared the whole thickness, and set with fine putty, a proportion of at least $\frac{1}{8}$th to be headers; and upon the average the length of both headers and stretchers not to be less than $3\frac{1}{2}$ times their breadth.

The various copes, or cornices forming copes, of the several walls or parapets of, or connected with, the building, to be constructed in the most substantial manner, being of sufficient breadths, independently of their requisite mouldings or other projections, to cover their respective walls, and in lengths of at least $4\frac{1}{2}$ or 5 feet, closely jointed, and laid so as to form cross bond with the courses immediately underneath.

Upper surfaces, of every description, to be weathened, water jointed, grooved, and run with lead, and all under surfaces to be throated.

Inner sides of parapets towards roofs of wings, and other similar situations, to be brotched.

All the *outside steps, plats*, &c., to be of Craigleith stone, properly lapped over the steps or plats immediately below them, each step to be in 1 stone, neatly droved, solidly laid upon rubble walls, and otherwise completed in the most tradesmanlike manner.

The *large stones of plats* over principal gates or porches of front terrace, as also those forming pavement of the corridors, immediately over the entrances to the under class-rooms, to be parpened, droved on both sides, joggled at the joints, set with oil putty, and made completely water tight.

Hanging Stairs.—Steps and plats of stairs leading to great hall to be droved, and to have sufficient wall hold.

Steps and plats of hanging stairs to be droved with a wall hold of 9 inches, having polished skirting built into the wall as the work proceeds, and projected with a rebate so as to receive the $\frac{7}{8}$-inch deal lining, as afterwards described.

All steps and plats in other parts of the building, not particularly described, to be droved, and in every case to have skirting, as specified, for hanging stairs.

Corridors to have droved Craigleith plats, at least 6 inches thick, with an average wall hold of 6 inches at each end.

Gallery Stairs of Public Hall.—Hanging stairs leading to galleries of great hall to be of polished Hailes stone, having neatly moulded steps, and projecting skirting.

Furnace Chamber.—The arched chamber below great hall, as also passages at each end of the same, and under east and west corridors, to be laid with Craigleith scabbled flags, closely jointed.

Pavement of principal portico to be from *Montrose* or *Arbroath*, 3 inches thick, polished, closely jointed, set with oil putty, and well bedded with lime. All other places tinted blue on the plans, to be laid with droved Arbroath pavement, at least 3 inches thick, closely jointed, bedded with lime, and otherwise completed in the most tradesmanlike manner.

Droved *Hailes pavement*, not less than 4 inches of average thickness, to be laid on all sides of the building, having droved gutter course, 7 inches thick, with proper declivity, and strong iron gratings at the various crossings and angles where requisite for carrying off the surface water.

Chimney-pieces.—Each apartment to be provided with a finely polished and moulded chimney-piece of Hailes stone, according to the drawings furnished for that purpose; as also with the necessary nosings and covings. Hearths to be of polished Caithness or Arbroath pavement 2½ inches thick, and complete in 1 stone.

Chimney-flues to be built in the most careful manner, according to the section or such other drawings as may be furnished, and of such dimensions as may be required—to be wholly of the hardest Hailes stone, closely jointed, and accurately built in every respect, as no small packing whatever will be admitted in their construction.

Two accurately built flues 18 inches × 8 inches, for the purpose of ventilation, to be led as shown by the section, from the level of ceiling of each of the four class rooms of wings, so as to terminate immediately under the principal cornice of the sides next platforms; each ventilator to be provided with sliding cover and connecting rod, so as to open and shut when requisite.

Passage or thoroughfare leading to necessaries, as also chamber under great hall, to be arched with large flat bedded stones, wrought exactly to the radius, and otherwise finished in a tradesmanlike manner. Rubble of covered passage to be neatly coursed; and the rebates and lintels of all openings within it, as also each external angle, to be of brotched ashlar.

Octagonal Building.—Arches for supporting octagonal part of Rector's class-room, and others for similar purposes, to be 16 inches deep at the crown, 20 inches at the spring, and about 9 inches thick, with regular beds dressed to the radius. Sills and lintels to be of droved Craigleith stone, and, together with the cornices and other mouldings, to be finished in a manner corresponding with the other parts of the building. Stone ornaments or capitals at the apex of roofs to be carved, and completed according to the drawings.

The *retaining* or *terrace wall* in front, including architraves of entrance gates, cornices, copes, &c., to be wholly droved. The ashlar to be rusticated and in courses, as shown by the drawings, with a proper proportion of headers. Inner surface of said retaining or terrace wall, also interior of porches, and all parapets or passages connected therewith, to be brotched.

Saddle-backed copings to be droved, and holes to be sunk where requisite for railing.

The *cornices of entrance gates* of said terrace wall to be each in 1 stone. The vertical jambs and lintels to be also in 1 stone; and no stone of the upper cornice or coping to be less than 4½ feet or 5 feet in length; such other parts, as are not particularly described, to be done in the best manner.

Dry stone shivers to be filled up behind the terrace or retaining wall, in the manner shown by the section, and a layer of dry stone shivers, of a depth not less than 18 inches, to be laid below the level of sleepers of ground-floor; as also below the pavement of every part of the building.

Brick partitions to be built of best hard burned double stock, 6-inch bricks, and arches of 4½-inch brick, to be turned between joisting of wings, so as to prevent, as much as possible, the communication of sound between the upper and under stories; the bricks to be well burned, exactly shaped to the radius, and, when dry, the surface to be run with thin lime, and otherwise completed in the most perfect manner.

Ingoings of windows, &c.—All windows, &c. to have inband and outband rebates placed alternately, inbands going ⅔ through the wall; and ingoings or scuntions of wall presses, windows, doors, &c., in stone walls, to be formed with large well-squared stones.

CARPENTER'S AND JOINER'S WORK.

Materials.—The whole of the beams, trusses, roofing, joisting, standarding, wall-battens, bond-timbers, wall-plates, safe-lintels, windows, outside doors, &c., to be of the best crown Memel timber, and of the various dimensions marked on the plans; framing of inside doors, of window-shutters, and of bond work of every description, to be also of best Memel timber, thoroughly seasoned, free of large knots, sap, and other blemishes.

Trusses of roof of great hall to be constructed as shown by the drawings; tie-beam in three divisions, 15 inches × 13 inches;

principal rafters 12 inches at bottom, 10 inches at top, and 5 inches thick; king post in three divisions, 15 inches × 7 inches; straining pieces 5 inches × 5 inches; wall plate below principal rafters 9 inches × 5 inches; wall plate under tie-beam 7 inches × 5 inches; ditto under common rafters 7 inches × 2½ inches, all scarfed at the joints, and secured at the angles as may be directed; purlins 12½ inches × 6 inches; common rafters 5½ inches × 2½ inches; ridge piece 10½ inches × 1½ inch.

Girders, &c., of Wings.—Trussed girders of floors of wings 14 inches × 14 inches; wall plate 6 inches × 3½ inches; joisting for ditto to be the whole length of class-rooms, bevelled at the sides to receive the brick arches, and to be 7 inches deep, 3½ inches on under side, by 2½ inches on upper side.

Roofings of Wings.—Tie-beams of principal trusses of roofs of wings 12 inches × 6 inches; king pieces, in two sections each, 5 inches × 3 inches; intervening pieces 6 inches × 5 inches; struts 4½ inches × 3 inches; principal rafters 6 inches × 3½ inches; common rafters 5½ inches × 2½ inches, and not more than 14 inches apart; purlins 7½ inches × 4½ inches; wall plates 6 inches × 3½ inches; upper ditto, for feet of common rafters, 5 inches × 3 inches; ridge pieces 11 inches × 1½ inch.

Platforms.—Joisting for lead platforms 10 inches × 2½ inches, and not more than 14 inches apart; ditto to be 4½ inches thick where bridles are inserted for skylights; trimmers or bridles for ditto 3½ inches and 4½ inches thick, in proportion to the spaces for which they are required; wall plates under all joists or sleepers, where the same are not more particularly specified, to be 6½ inches × 1¼ inch.

Circular Roofs.—Roofs over the Rector's class room and writing-class room, to be constructed, as explained by the drawing; circular wall plates in two thicknesses, 9 inches × 4 inches, scarfed in the most approved manner, and hooped and bolted, as afterwards described; 8 principal rafters of each roof 11 inches at bottom, 9 inches at top, and 4 inches thick; common rafters for ditto, 7 inches × 2½ inches; circular purlins 10 inches × 4 inches, finished; circular hoop or ring, 9 inches × 5 inches, strongly strapped up to inside of rafters at the level of the ceiling; ceiling joists 7 inches × 2 inches, and not more that 13 inches apart, strutted or dwanged, and otherwise tied to the rafters, as shown by the drawings.

Rafters, &c., of shed-roof over corridors to average 6 inches by 2½ inches.

Sleepers or joisting of ground-floors 7 inches × 2½ inches; brackets for floors of great hall to be 3 inches × 2 inches; joisting of intersoles in wings, forming water-closets for teachers, 9 inches × 2½ inches, and not more than 14 inches apart; flooring for ditto 1¼ inch thick, ploughed and tongued.

Boarding for lead platforms, as also sloping sides of roof of great hall, 1⅛ inch thick, finished, ploughed, and tongued; laths for slates to be at least 2 inches × 1¼ inch, safe lintels to average 1 inch in thickness for each foot in width of their respective openings, to occupy the whole thickness of the walls in which they are placed, and not to have less than 15 inches of wall-hold at each end.

Timber bricks or dooks, 5 inches × 2 inches, to be built at the height of every 20 inches into all ingoings of doorways, and other places where requisite.

Door standards 8 inches × 2½ inches, finished, strongly tennoned into the lintels, and fixed to the dooks; those of outer doors to be fixed with strong iron cramps or batts; door steps not to be less than ¾ inch thick; grounds for window and door finishings to be 2½ inches × 2 inches; grounds for wall finishings 2½ inches × 1 inch.

Bond timbers for wall battens or linings, 4½ inches × 1¼ inch, to be built into walls at the height of every 20 inches, or 2 feet, in the various situations where required, and to project ½ inch before the masonry; wall battens to be 1¼ inch × 1 inch, and not more than 13 inches apart; ceiling joists for great hall to average 5 inches × 1¾ inch, formed into panels, and strongly tied to the rafters, as shown by the drawings.

All *ceiling joists*, not otherwise described, to be 4 inches × 1½ inch, and properly strapped in such manner as may be directed. Beams over ceilings of class rooms in wings to be squared or strapped with fillets 1½ inch × 1 inch; brackets for plaster cornices, on ceiling of portico, and in all apartments, shown by the sections, to be formed according to drawings.

Lathing.—All the ceilings, and the whole of the walls that are strapped, to be lathed with the best Baltic split lath, not exceeding 1¼ inch in breadth, nor to be less than $\frac{3}{16}$ inch thick; the joinings to be broken at every 16 or 18 inches.

Gutter boards to be 1½ inch thick, and fitted perfectly solid to the bearers, with a declivity of 1½ inch to 10 feet, or otherwise, as may be approved of; drips to be at least 3 inches, and at distances not exceeding 10 feet.

Filleting, &c., for Roofs.—Roofs to have the requisite fillets, peinds, and ridge-rolls, and battens of the size and form, and at the distance shown in the drawings, to be laid on roof of great hall, for forming the overlaps and rolls of lead covering, as shall be more particularly described.

Kirb plate, 5 inches × 4 inches, to be laid round the opening of each cupola or skylight, and formed with a rebate or check, according to the drawings, in such manner as to be completely water-tight.

Floors to be of best red deal Petersburgh battens, not exceeding 6 inches broad, 1½ inch thick, finished, thoroughly seasoned, put together with oak dowels, ⅜-inch diameter, at the distance of 18 inches, and otherwise finished in the most durable and approved manner.

Deafening.—Floors of Teachers' water-closets to be deafened with a composition of lime and smithy or engine ashes, laid 3 inches thick, upon narrow ¾-inch boarding; fillets for ditto, 1 inch × ¾-inch, stoutly nailed to the joisting; when dry, the whole upper surface to be run with thin lime.

Doors of all the class rooms, practising rooms, and other apartments, to be framed 2 inches thick, finished; panels to be ⅞-inch thick, having planted mouldings, &c. Outer doors to be bound flush and bead, 2½ inches thick, having 1¼-inch thick panels.

Doors of principal entrance to the great hall, as also those leading to the under class rooms, to be framed, as shown by the drawings, with planted 1¼-inch mouldings, &c., round panels.

Window sashes to be 2½ inches thick, with ¾-inch astragals dowelled, and finished in the most approved manner; cases to be of the most substantial construction, having 1½-inch pulley pieces, with all the necessary battens, rods, inside and outside facings, parting slips, &c. and bedded into their respective places with patent mastic. *Skylights* to be 2½ inches thick, with 3½ inches framing; each skylight to be furnished with a ventilator of a proper construction. Sashes over the doors, &c., to be 2 inches thick.

Doors of cellars, furnace chamber, and other places entering from covered way under principal portico, to be of 1¼-inch narrow deal, ploughed, and tongued, and beaded at the joints; back bars or clamps 7 inches broad, firmly nailed, and otherwise substantially completed.

Architraves and Facings.—Windows, doors, and other openings in hall, to be finished with broad, single facia architraves, as shown by the sections; plates not to be less than 1 inch thick, with mouldings according to drawings. Windows, doors, and all interior openings of class rooms, lobbies, practising rooms, passages, &c., to be finished with moulded facings 6 inches by 1 inch.

Teachers' *water-closets,* entering from east and west corridors, to be neatly fitted up with mahogany seats and risers, and bound flap 1¼ inch thick, to be lined to the height of 4½ feet with ¾-inch narrow deal, ploughed, tongued, and beaded, and finished with a neat coping at top; a cistern of 1⅝-inch wood to be furnished to each closet, 4 feet long, 3 feet wide, and 3 feet deep.

Each of the seats of Boys' necessaries to be of hard wood, 1½ inch thick, grooved into the stones at the back and ends, and neatly finished, but without any flaps; risers, or breasts, to be of droved Caithness pavement, 3 inches thick, grooved into the stone at their ends, and otherwise completed in the most substantial manner.

Part of *seating*, south end of *great hall*, 12 inches broad; ditto for the Boys 9 inches broad, and 1¼ inch thick finished; feet for ditto, morticed into tops, to be 9 inches × 1¼ inch, and not exceeding 2½ feet apart. *Gallery* on each side to be supported by strong brackets or needles inserted into the walls, 13 inches broad, and 3½ inches thick. Longitudinal joists, on each side 6 inches × 2¼ inches; ditto for fillets, 6 inches × 1½ inch; floors of 1½-inch wood, ploughed and tongued. Moulding of front to be neatly worked, and the soffits between the brackets to be formed into panels, and otherwise finished according to the drawings.

Consoles or trusses for galleries to be neatly carved, and completed according to the drawings. Railing in front of galleries, of stairs leading thereto, and also that for enclosing area in front of seating, to be finished with a substantial mahogany cope, and made otherwise complete.

Interior door-pieces of the several entrances to the hall to be fitted up in the most substantial manner. Pilasters of principal entrance door to be 1¼ inch thick; linings at least 1 inch thick; and the cornices and other mouldings accurately finished according to the drawings.

Ingoings of all the windows of the public hall and class rooms, including soffits, to be finished with 1¼-inch thick bound linings, having ¾-inch panels, and planted mouldings. Sills of windows above gallery of hall to be finished with 1¼ inch deal, securely fixed to the bond timbers underneath.

Lining.—The great hall, as also the various class rooms and apartments connected with them, including lobbies and staircases, to be finished to the height of 4½ feet with narrow deal lining, ploughed and tongued, and beaded at the joints, grooved into the floors at bottom, and secured at top by a plate of 1½-inch red deal 6 inches broad, with a neat projecting moulding, &c., according to drawings; besides which, the whole to be properly fixed to the intervening bond timbers; ingoings and soffits of doors, &c. (with the exception of those of the great hall, which are to be bound), to be also finished with $\frac{7}{8}$-inch deal lining, ploughed, tongued, and beaded; finishing of window breasts to correspond with lining round their respective rooms; door stops not to be less than $\frac{3}{4}$-inch finished; skirting, where necessary, to be 6 inches broad, and $\frac{3}{4}$ inch thick; one window in each apartment to be double hung; the others to be single hung; two windows on each side of great hall to be hung on centre pins, with balance weight and spring latch to each.

Treads of steps leading to seats in hall to be projected in front of the breasts or risers, so as to form a moulding in front, and to be otherwise finished in a neat manner.

PLASTERER'S WORK.

The whole ceilings, soffits, walls, partitions or other parts, which are not specified to be finished with deal lining, to be completed with the best 3-coat plaster. Cornices and other mouldings to be finished in conformity to the drawings, or such other as may be furnished during the progress of the work. The styles and rails forming coffering of ceiling of public hall, and other apartments, as also mouldings of every description, to be run with the greatest precision and accuracy.

Ceiling of principal portico, as also of the corridors on each side, to be finished as shown by the drawings; and every part of the plaster work, both in regard to materials and workmanship, to be of the best description, free of cracks, blisters, or other blemishes, and completed in the most workmanlike manner in every particular.

PLUMBER'S WORK.

Sloping sides of roof of great hall to be covered with lead weighing 7 lbs. per foot superficial, with sufficient laps, where necessary; the lateral rolls and overlaps to be formed in the neatest manner, as explained by the drawings.

Platforms to be covered with 7-lb. lead, with the necessary rolls and overlaps, the distance between which not to exceed 30 inches; gutters to be laid with 7-lb. lead, having a declivity of 1½ inch to 9 feet, with 3-inch drips at distances not exceeding 10 feet; breadth of lead to extend at least 8 inches upon slope of roof, and on the side next parapets, to stand 1½ inch above the top of the highest adjoining drip; flashings or aprons of 6-lb. lead, 5 inches broad, round all gutters, skews, &c., joggled into the parapets, and pointed with patent mastic; ridges and peinds to be covered with

6-lb. lead, 16 inches broad; rain-water pipes 4 inches diameter, for discharging water from the roofs, of 7-lb. lead, well soldered at the joints, with proper cisterns and gratings at top, to be placed in the several situations shown by the plans; raglets, or channels, being formed in the walls for that purpose; gutters to be also provided with 3-inch flood or safety pipes, and otherwise put out of hand in the most complete and secure manner.

Cisterns of water-closets to be lined with 7-lb. lead, and to have the necessary ball cocks, water pipes, &c.; *water-closets* to be fitted up with best patent apparatus with 1-inch feeding pipes, cesspools, &c., of the most approved construction; soil pipes to be 5 inches diameter, and every particular finished in the most substantial manner; a neat washhand basin with the necessary brass plug, socket and chain, service pipe, nose cock, &c., to be placed in the corner opposite to seat of each water-closet. A 1¼-inch service pipe to be connected with the main pipe in front, and carried in the direction of the Boys' necessaries, having the proper nose cocks for supplying water to the tank as occasion may require. Branches to be led from thence for supplying the Teachers' water-closets.

SLATER'S WORK.

Sloping sides of roofs, with the exception of roof of great hall, which is to be of lead, to be covered with the best *Welsh rags*, averaging 3 feet × 2 feet, and not less than ½ inch thick, laid upon laths or battens, not less than 2 inches × 1¼ inch. Each slate to be fixed with two stout malleable iron nails japanned with hot linseed oil to prevent rust.

The *lap* of each joint to be equal to ⅓ of the length of the slate; and the whole slater work to be otherwise finished in the best and most sufficient manner, made completely water-tight, and upheld by the contractor for five years.

GLAZIER'S WORK, &c.

All the windows and cupolas to be glazed with best *Leith crown glass*, free from twists or specks; glass of cupolas to be of an extra thickness; the whole to be well bedded in putty, back puttied, and otherwise finished in the neatest manner. Windows, &c. to receive two coats of oil paint before being glazed.

SMITH'S WORK, &c.

Hoop Iron.—The circular wall plates of roofs over Rector's and writing-class rooms to be hooped with iron, and the joinings to be completed in the most secure manner, as shown by the drawing; the cross section of the eyes being made fully one-half greater than that of the bars; and the whole to be of the best wrought-iron from Lowmoor, in bars not less than 4 inches × $\frac{3}{4}$ inch, and not exceeding 14 feet in length, proved with a strain of 40 tons, before being used. Cast-iron rings for receiving rafters at top, 8 inches × $2\frac{1}{2}$ inches, of the best quality, and formed according to drawing.

9 feet of cast-iron 4-inch pipe to be fixed at the under end of the several *pipes* for conducting water from the roof. 112 yards of *cast-iron railing* 5 feet high, balusters $1\frac{1}{8}$ inch square, and not exceeding 4 inches apart, to be put up at stairs of front entrance, and on parapets, &c. at each end of the building; railing of inside stairs to be of malleable iron, with $\frac{7}{8}$ inch square balusters and neat moulded Swedish cope; ditto enclosing centre area of hall and in front of galleries, &c. to be of the value of 14*s.* per yard, and finished according to such pattern as may be fixed on.

Gates of entrance of front terrace to be made according to drawing, with $1\frac{1}{4}$-inch wrought-iron framing, locks, &c., complete. Cast metal truss pieces for beams of wings to be 4 inches × $1\frac{1}{4}$ inch; the bolts to be of the best materials, and of the strongest and most approved construction; the bolts and straps of the roofings to be of the best wrought iron from Lowmoor, or other works, and suited to their respective purposes; straps for principal roof being $2\frac{3}{4}$ inches × $\frac{5}{8}$ inch, bolts $\frac{7}{8}$ inch diameter, with strong heads and nuts; straps and bolts for roofs of wings, &c., in proportion; outer door to be provided with the most substantial 9-inch rim locks, Scotch made, and otherwise of the best quality; class-room doors to have strong 7-inch mortice locks, with substantial Scots made bullet handles, &c., complete; teachers' water-closets to have best spring latches, with 4 pass-keys to each; doors of furnace chamber, and other places adjoining, to have 7-inch rim locks.

Hinges.—Outer doors, as also those of class-rooms, and other apartments, to be hung with 8-inch double-jointed hinges, each thick door having 3 hinges; small doors of cellars, &c., to have 6 inches double joints; double-leaved doors to be provided with strong Scots made barrel bolts, &c.

One *window* in each apartment to be *double hung*, the others to be single hung, having 2½ inches strong axle pulleys, suitable cast metal weights, patent line, and everything complete ; 4 high windows in hall, and 1 in each of the octagons, of Rector's, and writing class-room, to revolve on strong centre pins, having a quadrant, &c., to each. Under sashes to have strong Scots made brass lifters.

Where the explanation of any part of the work has been omitted, it is to be understood that the manner of executing it is to approximate, as nearly as possible, to such other parts of a similar description, as have been more particularly specified.

EAST AND WEST LODGES.

The *masonry* of the east lodge, containing two class-rooms, and of the west lodge, containing accommodation for the Janitor, to be executed in the same style as that of the principal building, with the exception of the columns, which are not to be fluted. The three principal fronts of each lodge above the level of the terrace to be polished; the north fronts to be brotched with droved mouldings. The court at end of east lodge to be laid with brotched pavement ; and the stair leading to high class-room to be droved, having plat or landing joggled at the joints, set with oil putty, and made completely water-tight.

Cast-iron beams for supporting east wall to be of the best quality, and made according to drawing, the area of the transverse section being 24 inches, with a wall hold of at least 9 inches ; pillars to average 6 inches diameter, and at least 1 inch in thickness, set into stone sockets at bottom solidly founded, and otherwise securely fixed.

The class-rooms to be finished in a style corresponding with that of similar apartments in the principal building, and the several details to be executed respectively in the same careful manner as already specified for work of a like description. The apartments in Janitor's house to be finished with beaded facings and skirtings, with the exception of the principal room, which is to have single fascia architraves, base mouldings, and bound window breasts, &c. The kitchen to have droved jambs and pavement, and in general the west lodge to be finished as shown by the plans and sections, understanding that every particular is to be executed in the most workmanlike manner, and according to the foregoing specifications, in so far as the same are applicable.

In preparing the estimates, it is to be observed that the following particulars are to be stated separately.

1st. Expense of galleries and seating of great hall, with the stairs, &c., connected therewith.

2nd. Estimate of Janitor's lodge to be stated separately.

3rd. Estimate of east lodge to be stated separately.

4th. Difference of expense between the coffered ceiling of great hall, as shown by the Drawing, and of a plain elliptical ceiling, without sunk panels, to be stated.

5th. It is to be understood that such additions to, or deductions from the plans, as may, during the progress of the work, be directed to be made, shall not affect the contract in any respect, excepting that such work as may be executed in addition to what is expressed or implied by the terms of the foregoing specification, with the various plans, sections, elevations, or other drawings therein referred to, shall be charged in conformity to the prices filled up in the following schedule; and also that such work as may be included in said specification and relative drawings, but not required to be executed, shall be deducted at these rates.

Rubble, reduced to 2 feet thick . . . . .
Rubble, reduced to 1 foot ditto . . . . .
6-inch brick partitions . . . .
Lineal vents . . . .
Superficial polished ashlar . . . . . .
Superficial circular ditto, single measure . .

Per Foot

Superficial droved ashlar . . . . . .
Superficial circular ditto . . . . . .
Superficial brotched ditto . . . . . .
Superficial circular ditto . . . . . .
Superficial polished Montrose or Arbroath pavement 3 inches thick, closely jointed and well bedded with lime . . . .
Superficial droved ditto . . . . . .
Superficial polished Craigleith pavement . .
Superficial droved ditto . . . . . .
Superficial polished mouldings, Craigleith stone .
Superficial droved ditto . . . .
Cubic timber, in beams, &c. . . . . . .
Cubic timber in safe lintels . . . . . .

Per Yard

Joisting 7 inches × 3 inches, and 14 inches apart .
Flooring 1½ inch thick, dowelled . . . . .
Flooring 1¼ inch thick, ploughed and tongued .

Per Yard

$\frac{7}{8}$th inch lining on walls, including bond timbers, &c., as specified . . . .

Battening on walls, including bond timber or holdfasts . . . .

Best 3 coat plaster . . . .

Per Foot

Lineal plain plaster mouldings under 15 inches girth . . . .

Superficial plain plaster mouldings, above 15 inches girth . . . .

Superficial 7lb. cast sheet lead on platforms and gutters . . . .

$1\frac{1}{4}$-inch drawn lead pipe, $5\frac{1}{4}$lb. per foot . . . .

1-inch drawn lead pipe, 4lb. per foot . . .

$\frac{3}{4}$th-inch drawn lead pipe, ditto . . . . .

5-inch soil pipes, including solder, 9lb. per foot .

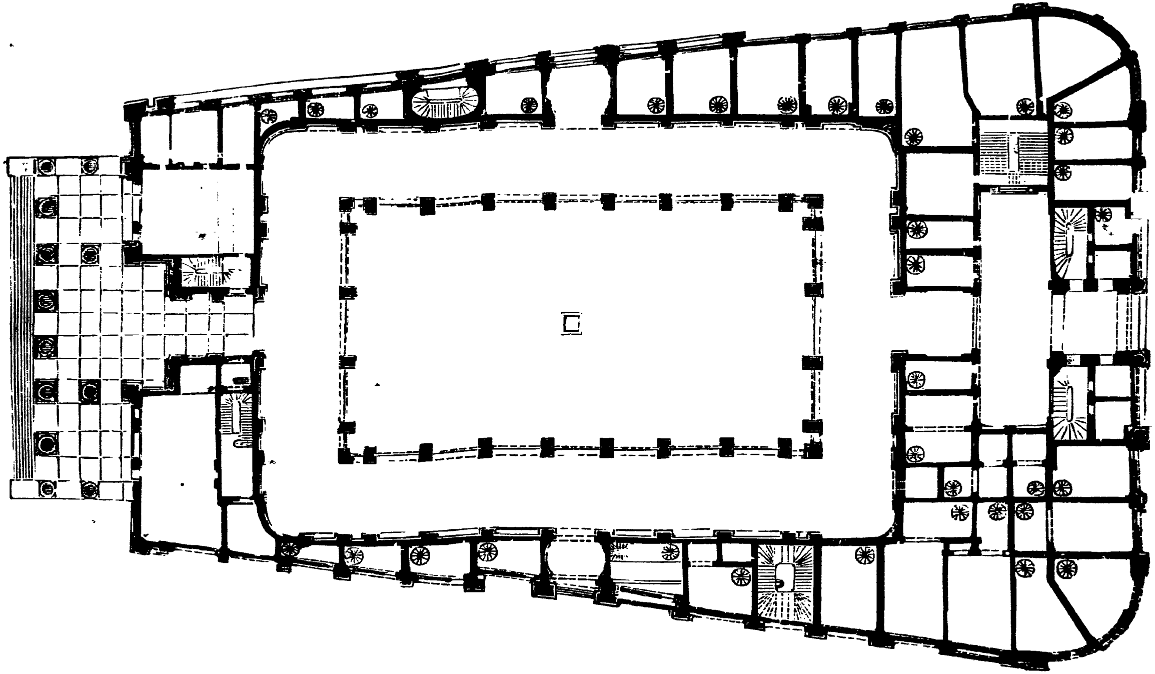
4-inch rain-water pipes, including solder, wall hooks, &c., complete . . . .

The price of any article omitted to be regulated by that nearest corresponding to it in the above schedule.

The several works, as described in the preceding specification and drawings therein referred to, to be executed in the most approved, substantial, and workmanlike manner, entirely to the directions and satisfaction of the Architect appointed by the Town Council, or such other person as they or he may intrust to the superintendence of the operations, who is to have power to stop the work in the event of his finding any part done or doing inconsistent with the spirit of this specification or drawings therein referred to. He shall also have power to direct the same to be rectified in any way he may consider right.

The Contractor to provide materials of every description: also all tackling, scaffolding, centering, and implements which may be necessary during the progress of the buildings, including whatever may be required for their completion, in every particular, either referred to or implied by this specification and relative drawings, or to such further drawings and directions as may in the course of the operations be given from time to time. It is to be particularly understood, therefore, that any omissions which may afterwards be discovered shall not affect the terms of the contract.

Contractors to find security to the satisfaction of the Lord Provost and Town Council for the fulfilment of their contract; and to complete the whole, or any part of the work, at such period as may be agreed on.



New Royal Exchange.

W. TITE, ARCHITECT.

NEW ROYAL EXCHANGE.

Contract and Specification for the Completion of the Building. W. TITE, *Architect. September,* 1841.*

SUMMARY OF THE COVENANTS CONTAINED IN THE CONTRACT FOR THE ERECTION OF THE NEW ROYAL EXCHANGE.

1. *Covenants on the part of the Contractor.*—That he will execute the works described in the specification hereto annexed, and in the plans, sections, and drawings now made and prepared, in a good and workmanlike manner.

That he will find and provide all materials, machinery, scaffolding, articles, matters, and things requisite for that purpose.

That he will engage and employ all such workmen as shall be necessary for completing the same within the time specified.

That he will constantly employ in each department of labour a competent foreman.

That he will forthwith discharge any foreman or workman whom the Architect shall, by a written notice, require to be discharged, and will not afterwards employ him upon the works without the Architect's consent.

That he will provide all labor-rods and other things necessary for setting out the works; that he will set them out at his own cost; and, in case of error or mistake therein, will amend the same to the satisfaction of the Architect.

That he will maintain the hoard, and employ a sufficient number of gatekeepers and watchmen.

That he will stop the construction of stonework or brickwork in unfavourable weather, upon the service of a written notice from the Architect.

That, if such notice be not complied with, the Architect may pull down the work built in contravention thereof, and the cost of so doing shall be paid by the Contractor.

That, in the absence of the Architect, any Clerk of the Works may object to the use of materials which appear to him improper, and stay the execution of any part of the works, which in his judgment is being unsoundly or imperfectly constructed, until the determination of the Architect shall be had thereon.

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* This is a very remarkable form of specification, departing from the usual precedents, and embodying, to a great extent, the bill of quantities with the description of the works.—T. L. D.

That he will, within 24 hours after notice in writing from the Architect, remove from the ground any materials, which the Architect shall consider to be improper, and proceed with materials corresponding with the specification.

That he will, within seven days after notice in writing from the Architect, pull down any part of the works, which the Architect shall consider to be improperly executed, and erect other works in the place thereof to the Architect's satisfaction.

That, in default of his so doing, if it shall appear to the Architect that the works are not being proceeded with so as to be likely to be completed by the time specified, and he shall thereupon give a written notice requiring the completion of any part of the works by a time therein limited, and such notice shall not be complied with, or if the Contractor shall become insolvent or declared bankrupt, in either of these cases the Architect may withhold the certificates for payment, may take the further execution of the works out of the hands of the Contractor, and may employ others to complete the same at such wages or prices as he may think proper; and the costs of so doing, being conclusively ascertained by the Architect's certificate, shall be defrayed out of the standing balance, or otherwise be paid by the Contractor.

That the persons who may be employed by the Architect, in pursuance of the authority contained in the last covenant, may use all materials and things brought upon the ground by the Contractor.

That, during the progress of the works, he will preserve and maintain the same, and all the materials, &c. brought upon the ground.

That he will not underlet or assign his contract, or any part thereof, without the Architect's consent.

That he will complete and execute the works to the satisfaction of the Architect, and deliver quiet and peaceable possession thereof by the 20th June, 1844, or pay the sum of 20*l.* for every day in which default is made.

2. *Covenants on the part of the Corporation of London and the Mercers' Company.*—That they will pay to the Contractor, as the price and cost of executing the works, the sum of 115,900*l.* in manner following; that is to say, at the expiration of every month 90*l. per centum* upon the value of the work executed, as certified by the Architect, and such further sums as will reduce the balance remaining due to the sum of 5000*l.*; and within six calendar months from the perfect completion of the whole works, if the Contractor shall procure a certificate from the Architect that they

have been executed to his entire satisfaction, the remainder of the contract price, which shall be then unpaid.

3. *Provisos and Mutual Covenants.*—That the Architect may appoint whom he may think fit to execute the carving, sculpture, and modelling work, at an expense not exceeding 9847*l.* 10*s.* for the carving, 3500*l.* for the sculpture, and 1070*l.* for the modelling.

That he may enter into contracts with the persons so appointed, in the name of the principal Contractor, who shall be bound to adopt such contracts, and make others in his own name, without being entitled to any sum in respect thereof, beyond the amount of his tender.

That the Contractor shall execute works shown on the drawings, though not set forth in the specification, or *vice versâ;* and also whatever other works are necessary, if they may be reasonably inferred to have been intended in the original design.

That dimensions figured on the drawings shall be preferred to the scale.

That drawings to the largest scale shall be adhered to in preference to those upon a smaller scale.

That all the materials, machinery, scaffolding, articles, matters, and things brought upon the ground shall be the property of the two Corporations during the progress of the works, but may be removed by the Contractor upon their full and perfect completion.

That the Architect may make (as often as he shall think fit) any alteration of, addition to, or omission from the said intended works; and the Contractor shall adopt the same forthwith upon notice in writing; and, when so made, all the covenants relative to the undertaking generally shall be applicable thereto, as far as circumstances will admit.

That previous to the commencement of additional work, the Contractor shall give a notice thereof in writing to the Architect, and shall likewise, by ten o'clock on Wednesday in every week, deliver to the Architect or Clerk of the Works a return in writing of the additional work executed; and also shall cause a competent person to attend on Friday in every week to take an account, in conjunction with another person to be appointed by the Architect, both of such additional work and of the work omitted. And, when the amount is taken, the quantities shall be entered in a book to be kept in the custody of the Architect, and every entry shall be attested by the signatures of the Architect and the Contractor, or of their agents authorized by notice in writing, or in default thereof no claim or charge shall be made or allowed by or against the Contractor on account of the same.

That additional or omitted work shall be valued and allowed for at the prices in the schedules issued by the Office of Woods and Forests, except that upon measured work a rebate of 10 *per cent.* on masonry, and of 7½ *per cent.* on other work shall be deducted therefrom.

That disputes, with respect to what shall be deemed additional or omitted work, or with respect to the value thereof, shall be referred to the Architect of the works and another architect to be nominated by the Contractor; or, in case of their not agreeing, to an umpire who is to be an architect, and chosen by the two others, before the matter in difference is proceeded in.

That the two Corporations, or the Joint Gresham Committee, may remove the Architect; and in such case, or in case of his death or resignation, may appoint any other whom they may think fit.

That the Contractor shall be allowed, for the completion of the works, seven days beyond the time before specified for every 500*l.* in value of additional work; and also, in case of fire or a strike of workmen, such further time as the Architect shall certify to be fair and reasonable.

EXCAVATOR.

N.B.—The excavations and certain works in basement had been already done.—T.L.D.

BRICKLAYER.

MATERIALS.

The *bricks* are to be the best hard well-burnt stocks, laid in mortar composed of the best Dorking, Merstham, or other equal and approved stone lime, and clean, sharp river sand, free from all filth and impurities, well mixed together in the proportions of 3 equal measures of sand to 1 equal measure of lime, ground and tempered in a pug or horse mill, until it becomes of an even and proper consistency. The *lime* is to be thoroughly and freshly burnt, and must be kept in an enclosed shed; and no more mortar is to be made at one time than is sufficient for each day's consumption. The bricks are to be laid with a close joint, properly bonded, and well flushed-up solid with mortar, and the filling in bricks are to be rubbed in and drawn together, so as to make each joint flush and full of mortar, or otherwise to be grouted if directed. The whole of the brickwork, in external and internal walls, is to be brought up level at the top of every course of the external stone ashlar, and none of the bedding joints of mortar are to exceed $\frac{1}{4}$ inch in thickness.

The *brickwork in cement* to be laid with cement composed of equal parts of fresh and good Roman cement and washed river sand. In building in cement, the bricks are to be wetted if required.

The whole of the walls of the building are to be carried up together, and from time to time to be finished level throughout, at least every 6 feet in height. The whole to be effectually covered from time to time with boards or otherwise, whenever the Architect shall direct. The *fire-proof arches* are not to be built until the building is covered in. Good and sufficient *scaffolding* is to be provided for the whole of the brickwork, and is not to be struck until directed by the Architect. To build all brickwork shown in the drawings and herein described, and perform all bricklayer's work necessary for the proper completion of all other trades, and for the completion of the intended buildings.

To *excavate* for the areas and vaults outside of building, and perform all digging required for the execution of any of the works. Generally fill in ground all round the building, to be well rammed in.

To lay proper beds of *concrete* inside of basement story under all the pavings, raising the basement floor to the varied heights required, and provide and lay, for this purpose, 1010 cubic yards of concrete. The concrete is to be composed of $\frac{1}{7}$th measure of fresh-ground stone lime, and $\frac{6}{7}$ths of clean Thames ballast from above bridge, well mixed, layed in even layers, and well beaten down and levelled for the pavings.

Basement Story—External Walls.—Raise and continue *brickwork* under portico and west wall, as is shown in plans, 7 feet 9 inches high. *Semi-arches* to all openings in same, the crowns inside 2 feet below the same level; the wide opening to have a segment arch. Filling-in walls in arches in two bricks to underside of arched soffits.

Raise and continue the south wall 2 feet 8 inches high on the average, to underside of granite plinth.

Raise and continue the east wall and two circular corners 5 feet 10 inches, to the height of the underside of the granite plinth.

Raise and continue the north wall to a height of 3 feet 2 inches above present level, to underside of granite plinth.

Brickwork to Merchants' Area and Ambulatory.—The *wall* round ambulatory to be raised and continued 8 feet 3 inches high; the piers of this wall to be built 1 foot 3 inches higher, this part of the work having been left down for arches; the arches to rise 4 feet 6 inches.

Build piers, arches, and inverted arches to carry inner façades, 14 feet 9 inches high.

Build walls round cellar in south-east angle 7 feet high; the tops to be cut to arches of vault.

Build 1½-brick walls, the lower parts cut to *inverts* in the present external openings, to enclose the basements on the south, east, and north sides, leaving openings for the doors and windows; these walls to be carried to the undersides of the shop, office, and window fronts, which are to be constructed in the arches of the façades, ground-story. Build walls all round, as is shown and described in Plan No. 1, to four areas, the footings to be level and correspond with the footings of the walls built; the walls to rack back, and the returns, forming sides of areas, will be 15 inches wide at top, and reduced to nothing at the bottom; 1½-brick semi-arches to be built over these areas, and also over the additions to these areas formed by the projections of the piers, with solid spandrils, leaving openings to be covered by area gratings, or by footway landings, which will be fixed in front of doorways, ground story. Build the *coal-vaults* on the north and south sides, shown in plan, with piers, and 1½-brick groined vaults, the tops flanched off. Those on south side 13 feet from bottom of footings to crown of arches, and those on the north side 12 feet high to crown of arches; the external faces of all the brick walls to these areas and cellars, and also the crowns of all the arches and tops of spandrils flanched off, to be rendered with Roman cement. The inner face of arches and spandrils below stone kerbs, and which is in sight from the basement and through the gratings, to be rendered and floted fair in Roman cement and coloured, with proper straight and circular arrisses. Form openings and kerbs for *coal-plates.*

Build all other walls and piers to complete the basement story, including all piers and chimney breasts, as is shown in Drawing No. 1, commencing from a height of 8 feet 3 inches from the bottom of the footings of the brickwork now done, or which is to be brought up to that height. Build all these walls the height required to receive the arches and floors, and walls, ground-story; and turn 1½-brick arches over all openings, apertures, and recesses.

Vaults of Basement Story.—The great cellar, under area and ambulatory, and also the parts adjoining and connected with it, under the portico and the western entrance, and under the entrances from the north, the south, and the east, to be covered with groined vaults, turned in three ½-brick courses, firmly and securely wedged and keyed, and with solid spandrils built and grouted, and with all other needful brickwork to adapt the work to receive the concrete and pavings, described with the masonry, and shown and described in Drawing No. 7, and also in Drawings Nos. 13 and 14. To build other arches over all those parts of the basement story which will have paving laid over them on the ground story, and also other arches, as shown in the drawings, and as follows:—Over the coal-cellar, the Porter's room, the staircase, the lobby and water-closet, and the small cellar adjoining to lumber room, all in the basement of the Royal Exchange Assurance offices; all these arches to be turned in three ½-brick rings, with solid spandrils and brickwork for paving; the arch to coal-cellar to be a semi-arch, with groins; the other arches to rise ⅓ of width of span, and leave opening for staircase to basement. Build similar arches and solid spandrils to the staircases of the London Assurance, Lloyd's rooms, and the unappropriated offices north side; also similar arches to the cellar adjoining staircase west of Lloyd's, and the area south side of Lloyd's. All these to have *solid spandrils*, and to be prepared for paving, leaving openings for areas and for the staircases to pass through; the spandrils under the urinals and water-closets adjoining Lloyd's staircase are to be left open, and dwarf walls to be built for plates. All parts of the basement of the banking-house in the north-west angle, excepting kitchen, to be covered with 1½-brick arches partly groined, and with solid spandrils and brickwork over for paving, excepting to the part under banking-room ground-story, where the spandrils are to be left open and dwarf walls built for sleepers. Build extra brickwork on spandrils to carry steps and upper landings in the south-west and north-west entrances. (*See* the plan of the ground-story.) The arches to staircases and over water-closets to rise one-third of span; the other arches to be semis.

Build brickwork in the *backings of the granite plinth and pedestals*, and in other parts of the external façades, including the west façade under the portico, as is shown in the drawings; and, in addition, other work which will be directed by the Architect, so as to complete the brickwork up to the underside of the base of the Corinthian order to the extent of 23 rods and 137 feet reduced, in quantity.

Build the *walls behind the stone façades*, external and internal, up to the level of the one-pair floor, as is shown in the drawings, and also in the detail drawings of the masonry, with brickwork, with all projections, recesses, splay, and other irregularities, carefully and accurately cut and fitted to the masonry, and to be carefully bonded, backed, wedged, pinned, and grouted to it, so that the brickwork and masonry may be consolidated and bound together.

Build all the internal walls of the ground and mezzanine stories, including the wall round the ambulatory, and round east area, to underside of upper cornice, as is shown in the drawings, with arches over all apertures, recesses, windows, and doors. To build also in brickwork internal parts of walls each side of the five entrances, to be done as described to the great façades; and the Contractor is to provide for the execution of 33 rods of reduced brickwork especially for these walls to the five entrances. The Contractor is to construct fire-proof arches, part of them domed, and part groined, under the whole of the one-pair floor, excepting those parts which are occupied by staircases from below, and those parts which are over the offices of the Royal Exchange Assurance on the ground-story. These arches to bear upon the walls and piers, and on the iron beams shown and described in the Drawing No. 8, upon which is also indicated the thickness of the arches. Those which are to be covered with paving are to have spandrils filled in with brickwork, and all other brickwork needful to form beds for the paving. To construct also arches over the north entrance to the Royal Exchange Assurance offices in 1 brick, and over the recess in office adjoining to the said entrance in 1½, and also over the retiring-room adjoining to Lloyd's staircase in 1 brick, with solid spandrils to those parts which will have paving laid on them. The Contractor to build the internal parts of the stone façades from the level of the one-pair floor to the top of the Corinthian and Ionic entablatures, with brickwork, as is shown in Plans Nos. 4 and 5, and in the detail sketches which show the beds of masonry in those façades, and in manner as is described before for the lower stories; and the Contractor is, in the performance of this part of the building, to provide for the execution of 18 rods and 140 feet reduced of brickwork in that part of this work which is comprised in the west façade and its returns.

Build all the internal walls of the first and second stories of the building, which are shown in Plans 4 and 5, up to the level of the underside of the roofs of the first and second stories, and also the east gable wall of the great western span roof, up to the underside of the great stone parapet.

The Contractor to build brickwork above these levels, as will be directed by the Architect, and to the extent in quantity as follows:—

To the attic and balustrade of south façade, 6 rods and 64 reduced feet; to the attics and balustrade of east façade, including the two circular corners, 10 rods and 194 feet reduced; to the balustrade and attic of the north façade, 9 rods 205 feet; and to the balustrade of internal façades, 1 rod 219 feet reduced; and in carrying up the north and south sides of the tower, from the underside of the roofs adjoining, to the height of 13 feet 2 inches above the top of the Corinthian entablature of the east façade, 3 rods reduced; and in carrying up the west wall of tower, from the underside of the upper cornice of the east area to the same height of 13 feet 2 inches above the top of the Corinthian entablature, 2 rods of reduced brickwork; to the gable of western portico, and in backings to the entablature of portico, and in arches built on the inner pillars to support the gable and the great roof, and in backings to western parapet, and in filling in also the great parapet and shafts, built on the gable wall, at the rear of the great western span roof, 9 rods and 54 feet, making in the whole 42 rods and 192 feet reduced of brickwork, to be done to those parts according to directions to be given hereafter by the Architect.

Execute 18 rods of reduced brickwork in building parapets and gables to internal walls, and also in building chimney shafts above the level of the underside of roofs of the second floor.

Finish the external faces of the brickwork in east area, and in passage from east area to the ambulatory, and of chimney shafts, and other parts, which will be directed by the Architect, to the extent of 9800 feet superficial, with extra red-brick facing, the bricks cut to a length, and the work executed with a neat joint, struck both edges; and he is also to turn gauged arches with red-brick rubbers, set in putty, over all apertures and recesses in the same, to the extent of 586 feet superficial.

Build the internal parts of the tower and steeple walls (commencing at the height of 13 feet 2 inches above the Corinthian entablature) with brickwork, bonded and backed to the masonry, as described before to be done to the façade walls.

Build in basement story *sleeper walls* for partitions, sleepers, and fenders. The walls generally to have 2 courses in 9 inches, and 4 courses in 4½ inches, the outer walls, next concrete, under the paving to be ½-brick thicker, and ½-brick in thickness to be added to walls under partitions, for plates of floors adjoining. Build 20 *piers for 5 slate cisterns*, 4 courses in 2 bricks, and 4 feet high in 1 brick; to be 4 feet long. *Brick nog-on-edge* partitions of water-closets. Build *dwarf walls* under bottom steps of staircases, 2 courses in 3 bricks, and 3 courses in 2½ bricks.

Build in ground story *offsets in walls*, of 3 courses each, in 1½ inch to carry the plates of floors. Build six ½-brick walls, averaging 3 feet high, and cut to arches, to carry plates in floor of north-west angle, and 1 brick fender for slab or stove. All other arches to have solid spandrils prepared for paving and steps, and extra spandrils and walls to carry steps and plinths in the north and south entrances, at the west end. Build ½-brick *trimmers to slabs; brick nog-on-edge partitions* connected with water-closets and urinals.

The arch in water-closet, south-west angle, and in Lloyd's retiring-room in the mezzanine story, to have ½-brick walls for plates. Build trimmers for slabs and offsets for plates to all other parts of this floor. *Brick nog-on-edge partitions* of water-closets. Build in that part of the one-pair floor, which is not vaulted, trimmers for slabs, and build offsets for plates. Build in the arches pinnings, in ½ brick, averaging 1 course in height, under all the sleepers, and accurately cut to crowns of arches; also, similar pinnings under partitions in 9 inches, and add ½-brick to carry sleepers on one or both sides, where floors adjoin. Part of the pinnings will require to be higher on the arches, over shops which bear on walls, and not on iron beams. Build also ½-brick fenders for slabs. *Brick nog flat* the partitions each side of south staircase in the Royal Exchange Assurance Offices, and round staircase in the unappropriated offices.

Build on second floor *trimmers for slabs,* and offsets, where required, for plates. Brick nog on edge the partition round water-closet, and small north staircase of the Royal Exchange Assurance Offices.

The Contractor to *provide* for executing 21 rods reduced of brickwork in building division walls on the basement story, in forming coal-cellars and dust-bins to basement of shops, and in other similar works, which the Architect will direct.

Provide for executing 50 rods reduced of brickwork, as will be hereafter directed by the Architect, more than is shown or described, or to perform other works to the walls equivalent thereto in value.

All *upper courses of brickwork* upon which stone is bedded, and all relieving arches over apertures, and over large and long stones in masonry, and all parapets, and all window-backs, and all inverts, and 3 courses of brickwork every 4 feet in height, and all backings of piers, and all spandrils and filling in of stone arches, and other brickwork which may be ordered by the Architect, to be executed *in Roman cement,* as hereinbefore described, to the extent of 300 rods reduced of brickwork.

The bricklayer is to cover with tar and sand 6000 yards of *iron hooping*, supplied by the smith, and to fix it in various parts of the building, for the purpose of binding the work together, where and in such manner as the Architect shall direct.

To bed and point all frames, and to case all flues ; he is also to cut holes in walls and arches for pipes, and reinstate after, to the extent of 120 holes in 2 brick walls.

Execute work, beyond what is shown and described, to the extent of 8*l.* in value, in forming areas to 8 windows on the basement story.

Point and limewhite twice all vaults, and other work which may be ordered, to the extent of 8116 yards superficial.

Form 135 *curved shafts, from pipes to drains*, 18 inches long, 9 inches diameter, built and rendered all round inside with Roman cement ; and also build carefully with picked stocks 777 feet lineal of 9-*inch barrel drain*, and 899 feet lineal of 12-*inch barrel drain.* These drains are to have ½-brick rims, and the lower half inside, and the upper half outside, to be rendered in Roman cement, forming proper beds in the concrete for such drains.

Build *traps*, and execute other works to and connected with the drains, as will be ordered by the Architect, to the extent in value of 100*l.*

All those parts of the building to be constructed with Bricklayer's work, for which certain specified quantities of work are given, and all extra Bricklayer's work provided, to be examined and measured, and the variations, either way, valued and allowed for, according to the conditions of the contract.

MASON.

(*Generally to Portland Stone.*)

The *Portland stone* to be used for the masonry of the building is to be of the best quality, of an uniform colour, free from all loose vents, holes, shakes, and other defects. It is to be proved to the satisfaction of the Architect to be entirely quarried from the Waycroft Quarries, and to be so certified by the owners of those quarries.

Work.—All the stones are to be set with lewises and proper tackle ; all the angles and arrisses are to be very carefully kept ; and the lines of the mouldings, the curves, and the mitres (which latter are in all cases to be worked out of the solid), are to be chiselled to their true and proper form.

The *external face* of the work throughout is to be *rubbed fair.*

The *plain work* in all cases to be true, and out of winding; and the mouldings to be carefully worked, to preserve their true form and arrisses.

The *beds* and *joints* to be random chiselled, fair and out of winding, and to be sunk wherever necessary to make good work.

The *backs* of the ashlar and other stones to be roughly drafted square with the beds.

West Façade, including Portico and Pediment.—The *columns*, and all *pilasters* at rear of them, and within portico, to be executed in nine courses—*i.e.*, one to base, one to shaft, and one to capital. The bottom course of shaft will include the scotia and fillet of the base; the upper course of shaft will include scotia, fillet, and astragal; and the 9 courses to make a height of 41 feet. For the particulars of west front, see Plan 2, elevation No. 9, section No. 15; and Sketches marked B, and numbered 1, 2, 3, 4, 5, 6, and 7. The beds of pilasters at rear of columns, and inside portico, will be as follows:—*viz.*, those behind the external return columns to have 2 feet 6 inches bed; those behind the inner return columns, at the angles of the recess, to have 2 feet 6 inches bed on the west faces, and 2 feet 1 inch bed to the faces next the recess; each course being in two stones, with vertical joints on each face alternately. The ¼ pilasters in inner angles of recess to have beds 1 foot 6 inches; and those on each side of the opening to loggia, leading to ambulatory, to have beds of 1 foot 4½ inches. All of which beds are exclusive of the projections of the plinths, bases, and capitals, which are to have the extra bed needful for such projections.

The north and south quoin pilasters are shown in Sketches B, No. 5, and D, No. 21, and also in Sketches A, Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, and 10 No. 2. The two corresponding ½ pilasters, in north and south flanks, will have courses to correspond with the two quoin pilasters, and 1 foot 4½ inches bed, with the extra beds needful for projections in bases, capitals, and elsewhere.

The 6 bays of *ashlaring* in this front, and in returns in portico, will be similar—the lower part rusticated, the upper part plain; including moulded strings, and moulded cornices, and blocking; the beds throughout 7 inches, with extra beds for base mouldings, strings, cornices, blockings, and fascias. The two *Venetian windows*, including the rusticated piers and the great archivolts and panelled margins over, are shown in Sketches B, Nos. 4 and 5. The *flowers in panels* of circular margins will be formed of separate stones, and fastened with copper spindles 8 inches long.

The entablature to portico, its two returns inside, and to pediment, will be as Sketches B, Nos. 1 and 2. Two tiers of solid architrave, 2 feet 9 inches high, in addition, as shown in Sketch B, No. 1, will be carried over the interior columns, which divide the portico into three spaces, and the architrave will be continued all round portico and its recesses. There will be no masonry inside the portico above the architrave. The tympanum of the pediment will be formed of lofty slabs, 7 inches bed, and the pediment cornice will be as Sketch B, No. 2. The apex stone will be as follows:—viz., 6 feet long, 7 feet 6 inches wide, and 4 feet 8 inches high.

The north and south angle stones or springers as follows:—viz., 6 feet 9 inches long, 4 feet 3 inches bed, and 3 feet 7 inches high; the middle course below springer 6 feet 10 inches long, 4 feet 6 inches bed, and 2 feet high; and the lower course 2 feet long, 3 feet 7 inches bed, and 1 foot 1 inch high.

The architraves across openings will have arch joints, as is shown in Drawing B, No. 1.

The carved panels in north and south flanks are shown in Sketch B, No. 3, and the entablature to the north and south flanks will be as Sketch A, No. 20; and the quoin stones will have beds shown and described in plans of the quoins in Sketches A and D.

The balustrade course, with its carved dies, is shown in Drawing B, No. 6, and it will not continue over portico.

The details of the great parapet, shafts, and arches, at the rear of the great roof of portico are shown in Sketch B, No. 7.

Part of the upper course of Corinthian cornice, in the return flanks of the portico, will have extra thickness and be sunk, as shown in drawing of Section No. 15, and in Sketch B, No. 6; and a stone blocking will be fixed over it, the top to range with plain part of balustrade course.

To allow and provide for Portland plinths, below the Corinthian bases, to those pillars which stand upon the paving of portico, and for the pilasters and ashlaring within the portico, 500 feet cube of Portland stone, worked and fixed as shall be hereafter directed.

South Façade.—The masonry of this front is shown in the Plans Nos. 2, 3, 4, 5, and 6, and in elevation No. 10, and its details are further explained and shown in Sketches marked A, and numbered 1 to 24, both inclusive, including two parts of No. 10; the east and west quoins will be further explained in Sketches B and D. All parts not shown to be made corresponding and similar. There will be no Portland stone to this façade below the base of the Corinthian pilasters, except in the three central bays, and the Contractor is to supply and fix, with all labour complete, 150 feet cube of Portland, as will be hereafter directed. The Contractor is also to provide a quantity of Portland, to give greater beds and more bond to this façade, to the extent of 1284 feet cube, including all labour, working, and fixing, in addition to what is shown and described in the detail sketches.

East Façade.—The masonry of this façade is shown in the Plans Nos. 2, 3, 4, 5, and 6, and in elevation No. 11, and its details are further explained and shown in Sketches marked C, and numbered 1 to 20, both numbers inclusive. The quoins will be further shown in Sketches E of the circular corners adjoining. There will be no Portland below the base of the Corinthian pilasters and columns, except to the three central bays; and the Contractor is to supply 150 feet cube of Portland stone, with all labour, working, and fixing, as will be hereafter directed, in addition to what is shown and described in the detail sketches.

The North-east and South-east Circular Corners.—The masonry of these two circular corners is shown in Plans Nos. 2, 3, 4, 5, and 6, and in elevations Nos. 10, 11, and 12, and is also further shown and described in detail Sketches marked E, and numbered 1 to 15, both numbers inclusive. There will be no Portland stone required below the bottom of Corinthian base. The Contractor is to provide and fix, including all labour in working and setting, 83 feet cube of Portland stone, in extra beds, in some of the lower courses of these 2 façades, in addition to what is shown and described.

North Façade.—The masonry of this façade is shown in Plans Nos. 2, 3, 4, 5, and 6, and in elevation No. 12; and its details are further shown and explained in Sketches marked D, and numbered 1 to 25, both numbers included, and including also a second part of No. 3. There will be no Portland stone in this façade below the Corinthian bases, except in the central bays; and the Contractor is to supply 150 cubic feet of Portland, including all labour in working and fixing, as will be hereafter directed, in addition to what has been shown and described.

The Four Façades of Great Internal Area.—The masonry of these façades is shown generally on Plans Nos. 1, 2, 3, 4, 5, and 6, and in Sections Nos. 13 and 14, and is also further explained in detail Sketches, marked F, and numbered 1 to 15, both numbers inclusive. The whole to be Portland stone, including the lower pedestals, both orders, and the balustrade course. The Contractor to provide for fixing and completing, with all needful labour, 1743 feet cube of Portland stone, more than shown and described, to make the lower piers to contain more stone and less brickwork than is shown in the detail drawings.

The west entrance to be partly cased with plaster, and partly with Portland, as it is shown in Section No. 13 and Plans Nos. 2 and 3, and more in detail in Sketch G, No. 1.

The south entrance is to be cased with Portland stone to the height of impost moulding of the façades: above with plaster. The masonry is shown in Plans 2 and 3, and in Section No. 14; and it is also shown more in detail elsewhere.

The north entrance is to be finished like the south entrance, and it is shown in the same drawings; and it is further elucidated in Sketch G, No. 3, showing a plan of the ashlaring in alternate courses; the heights are the same as in Sketch G, No. 2.

The east entrance from the east area to ambulatory is shown in the same Plans, Nos. 2 and 3, and in Section No. 13, and is also more particularly delineated in Sketch G, No. 4. It is all brick and plaster, except the quoins, which are described in other sketches.

The east entrance under tower is to be cased with Portland stone to the height of and including the impost moulding of the east façade: part of the plinth will be granite. The groined vault over will be brick coated with mastic; but there will be a plain stone arch to carry west side of tower. The work is shown in Plans 2 and 3, and in Section No. 13, and its detail is further explained in Sketch No. 5.

The ambulatory is to have a pedestal, piers, and circular corners, executed in Portland stone, as is shown in the Plans Nos. 2 and 3, and in the sections 13 and 14; and is also further shown and described in the Sketches G, Nos. 6 and 7.

The east area will be faced with red brick; but the strings, cornices, blockings, dressings to doors and windows, and to piers and arches, will be Portland stone. These parts are shown in Drawing No. 17, and in detail Sketches H, Nos. 1 to 3, both numbers inclusive. The windows of ground story will have plain inner jambs, imposts, heads, and key-stones of Portland.

The *tower* will be entirely cased with Portland stone, excepting the top stone, forming stem of vane, which will be *Craigleith*. It is shown in elevation No. 16, and in Section No. 13, and in detail Plan No. 20; and it is also further explained and shown in Sketches marked I, and Nos. 1 to 11, both numbers inclusive. These sketches do not show that portion of the base of the west side of tower from the blocking course round east area to the commencing of the first course (*see* Sketch I, No. 1), nor do they show the lower portion of the tower above the roofs, on the north and south sides, up to the same level. The Contractor to execute these parts in such manner as the Architect shall hereafter direct; and he is to provide for supplying, working, and fixing 500 feet cube of Portland stone in these portions of the work.

The *chimney caps and parapets* above roof are to be capped with Portland stone, which the Contractor is to supply, work, and fix as the Architect shall hereafter direct, to the extent of 478 feet cube.

The Contractor to find all needful and proper *scaffolding*, and all proper *guard-rails, ladders, stages*, and other articles, to allow and enable the work to be executed properly, and with safety to workmen and to the public; and the Architect, his agents, and all workmen employed on any work, to have full use of the same until it is removed.

Work.—To execute all water-joints, sinkings, weatherings, jogglings, and rebatings necessary for the completion of the masonry; and he is to work all balusters, ½-balusters, rustics, neckings, grooves, champhers, Doric triglyphs, guttæ and fillets, Doric blocks, with 28 cylindrical drops cut on soffits; all perforations through stone, and all moulded panels in Doric soffit, all pateras moulded in frieze of the same order; the plain antefixæ in balustrades; all the perforations in the ornamental dado course in the internal façade; all dentils, and all flutings and niche heads; the hole in topstone for vane, and all holes for flues, with all other labour necessary to complete the masonry, to the full extent and meaning of the drawings and this specification.

To make all proper arrangements for, and to assist such persons as the Architect may appoint to execute all the *carvings* needful to complete the designs, and also the sculpture for the panels in south attic, with any other *sculpture*, carving, and cutting, which the Architect may direct, as hereinafter set forth, and as follows:—

Carvings in Portland Stone in external Façades.

Ft.	In.			
450	6	run	Ogee enrichment, 5 in. girt .	M
420	6	„	Ditto ditto, 5½ in. do. .	B^2
156	6	„	Ditto ditto, „ do. .	C^2
111	0	„	Ditto ditto, „ do. .	M^2
1147	0	„	Ditto ditto, 7 in. do. .	B
858	0	„	Ditto ditto, „ do. .	C
235	0	„	Guilloche enrichment, 4½ in. face	N
37	0	„	Ditto ditto, 8½ in. do. .	T
96	0	„	Soffit of corona, consisting of running foliage and rosettes, 16½ in. girt	F

No.		
84	Mitre leaves to 5-in. enrichment	M
78	Internal ditto, 5½-inch do	B^2
52	Ditto, and 52 external ditto do.	C^2
18	Ditto, and 6 ditto do.	M^2
28	Ditto, and 15 ditto 7-inch do.	B
9	Ditto, and 10 ditto „ do.	C
350	Leaf enrichments 7-inch face, 8-inch girt, at foot of modillions, as	E
290	Pendant enrichments on modillions	D
60	Ditto ditto ditto, and making good to sunk soffit, as	D
6	Pendant enrichments to face of block, and making good to sunk face, as	Q
6	Ditto ditto key-stone ditto ditto	X
3	Ditto ditto, 12 inches wide, 23 inches long, and 7 inches deep ditto ditto	I^2
20	Ditto ditto, 18 inches high, 6 inches extreme width, and 2 inches projection	H^2
10	Rosettes, 14 inches diameter	I
6	Small scroll profiles	L^2
6	Scroll profiles	K^2
6	Ditto, 22 inches high, 10 inches extreme width	U
4	Ditto, 21 inches high, 11 inches ditto	D^2
20	Ditto, 23 inches high, 6½-inches ditto	G^2
6	Scroll enrichments, 4 feet 6 inches high, 1 foot 8 inches extreme width	R
6	Ditto ditto, 3 feet 3 inches high, with two profiles, 6½ inches extreme projection, and 6½ inches wide on face	
4	Consoles with scroll profiles 15 inches high, 11 inches projection, and baluster-moulded face, 10½ inches wide	
2	Ditto ditto, ditto, and do. face 4 feet 3 inches wide	
6	Ditto ditto, 19½ inches high, 11 inches projection, and baluster-moulded face, 12 inches wide	
12	Ditto, ditto, ditto, 13 inches projection, ditto ditto, as	W
18	Enrichments in panels 7½ feet high, and 10 inches extreme width, as	A^2

No.		
6	Half ditto, ditto, ditto	
3	Leaf enrichments, 3 feet high, 8½ inches wide, and making good to sunk face	S
6	Enriched spandril panels, 3 feet 9 inches long, 15 inches average width, as	N^2
3	Ditto keystones, 2 feet 6 inches wide, 1 foot 8 inches high, and 1 foot 7 inches deep, including return of soffit	Z
14	Ditto ditto, 3 feet 3 inches extreme width, 4 feet high, 17 inches profile	O
20	Bracket ornaments, 7½ inches long, 1 foot 9 inches wide, and 6 inches high, with baluster-moulded soffit, and scroll sides, with enrichment in spandril of scroll and pendants, flower at termination	F^2
6	Ditto, ditto, ditto	J^2
4	Scrolls or trusses to compartment of centre window circular corner, with two profiles to each, 5 feet high, 1 foot 2 inches face, and 1 foot 2 inches extreme projection, as	Y
4	Half ditto ditto, with one return profile ditto, ditto, ditto	„
3	Centre ornaments to window head, including spandril enrichment to frieze on each side	V
2	Foliage enrichments in high relief, 6 feet 3 inches long, 18 inches wide	E^2
6	Festoon enrichments, 11 feet 6 inches long, and making good sunk face to same	P
2	Enrichments on archivolt, in bold relief, 10 feet × 2 feet 6 inches average	H
2	Enriched panels, 5 feet × 7 feet 10 inches, and making good sunk face to ditto	K
2	Festoon enrichments in high relief, consisting of two swags, two pendants, and three ties, 38 feet extended, and 9 inches projection, including making good sunk face to same, as	J
2	Imperial crowns with foliage and fruit in 12 inches relief, 7 feet × 4 feet 6 inches, including making good sunk face to same	
4	Ionic capitals to ¾-columns, 1 foot 6½ inches diameter at necking, with angular volutes,	

No.

egg and tongue enrichment, and flower on face of abacus, as . . . . . G

4 Corinthian capitals to pilasters, with 2-quarter return faces 12½ inches each, including abacus, and stopped and made good on sunk face . . . .

8 Ditto ditto, with one-half face and one ¼ return ditto ditto . . . .

23 Ditto ditto, with one whole face 4 feet 2 inches diameter at necking, and two ¼ returns, ditto ditto . . . . . .

2 Ditto ditto, with 1 whole face, and 2 half returns, ditto ditto . . . . . .

4 Ditto ditto, with 1 whole face, one ¾ return, and one ¼ ditto ditto . . . . . .

3 Ditto ditto, with 2 whole faces, and two ¼ returns, ditto ditto . . . . . .

2 Ditto ditto, with 2 whole faces, and one 12-inch and one 24-inch return, ditto ditto . .

2 Ditto ditto, with 3 whole faces, and two ¼ returns, ditto ditto . . . .

14 Ditto ditto to columns, 3 feet 7 inches diameter at necking, and 4 feet 10 inches high, including moulded abacus . . . .

2 ¾ ditto, ditto, ditto, ditto . . . .

In Façades next Court.

116 Brackets in cornice, with 2 scroll sides, 23 inches high, 16 inches extreme projection, with enrichments in sunk spandril of scroll, the face 5½ inches wide, with 2 bevilled sinkings as triglyphs . . . .

20 Panels in balconies to one-pair windows, 4 feet 4 inches long, and 1 foot 2 inches high, 2 faces, as . . . . Q^2

40 Ditto ditto, 18 inches long, 14 inches high, 1 face only . . . . R^2

40 Scroll profiles . . . . S^2

20 Moulded and enriched keystones, 25½ inches high, 13½ inches extreme width . . T^2

20 Shield ornaments on keystones, 2 feet wide, 2 feet 7½ inches high, and 8 inches projection . . . . . . U^2

No.

24 Ionic capitals to ¾ columns, with angular volutes, including abacus . . . V^2

8 Circular pendant ornaments, 10 feet long extended, and 12 inches girt . . . W^2

External Balustrade, &c.

2 Trusses or scrolls, 3 feet 6 inches high, to chimney shaft, with baluster-moulded face 2 feet 6 inches wide, and two profiles with scrolls or volutes 1 foot 6 inches extreme projection, the spandril filled in with enrichments, as X^2

4 Terminal ornaments, 2 feet 3 inches wide, and 1 foot 2 inches extreme height, as . Y^2

4 Enrichments to caps of chimney-shafts, 24 feet 4 inches long . . . . . . Z^2

5 Terminals, with 4 faces 5 feet high, 3 feet 2 inches extreme width . . . A^3

9 Ditto with 3 faces, 5 feet high, 3 feet 2 inches extreme width . . . . . . A^5

6 Ditto with 1 face, 2 feet 8 inches high, and 3 feet 2 inches extreme width . . B^3

2 Shell ornaments, with 2 scrolls to each, whole length 4 feet 6 inches, and 2 feet 4 inches high . . . . C^3

4 Terminals, 3 feet 6 inches square extreme size, and 5 feet 3 inches high, with scroll feet, 3 faces each, including panels in sides D^3

2 Enriched frames, with foliage round the same, 7 feet 10 inches wide, and 6 feet 9 inches high E^3

2 Brackets, 20 inches extreme width, and 3 feet 1 inch high, with 1 scroll face, and 21 inches return . . . . F^3

2 Festoon enrichments, with pendants and ties, 18 feet 8 inches long extended, 2 feet girt average, and making good sunk face to same . . . . . . G^3

2 Ditto ditto, 14 feet 6 inches long, extended ditto ditto . . . . . . G^3

8 Scroll profiles to pedestals 4 feet 3½ inches high, 3 feet 11 inches projection . . H^3

3 Large shields, with mantling and foliage in high relief, 8 feet 6 inches wide, 8 feet 6 inches high, and making good to sunk face . I^3

No.		
2	Scroll brackets, 21 inches extreme width, and 2 feet 4½ inches high, with baluster-moulded returns 2 feet 8 inches wide	J^3
2	Scroll brackets, 12 inches extreme width, and 2 feet 6 inches high, with baluster moulding, 2 feet 8 inches wide	K^3
4	Leaves, 12 inches × 9 inches at foot of scroll	L^3
16	Scroll profiles, 15½ inches extreme width, and 2 feet 4 inches high	M^3
16	Ditto, 9 inches extreme width, 1 foot 4 inches high	N^3
8	Foliage enrichments in panels, 2 feet 2 inches extreme width, and 3 feet 6 inches high	O^3
8	Scroll acroteria, 3 feet 9 inches long, and 1 foot 9 inches high	P^3
2	Pine terminals, 1 foot 8 inches diameter, 2 feet high, with leaves, &c.	Q^3
2	Enrichments in panels consisting of mace, sword, cap of maintenance, and drapery, 9 feet × 4 feet	

In Balustrades to Façade next Court.

20	Faces of enriched open panelling, 10 feet 4 inches long, 2 feet 5 inches high, 12 inches thick, in 5 compartments each	R^3
20	Antefixæ with lions' masks 12 inches diameter, 4 inches projection, including semicircular moulded band over same	S^3
8	Scroll trusses with baluster-moulded face, 1 foot 5 inches wide, and 2 feet 6 inches high, with volutes on both profiles, 13 inches high, and 9 inches wide	T^3
24	Terminals, 1 foot 9 inches × 1 foot 9 inches, and 3 feet high, each with 4 faces	U^3

In Ambulatory, including Lobbies, &c.

1	Enrichment in archivolt, as before	H
1	Festoon enrichment ditto	J
2	Spandril ornaments in panels, 4 feet 3 inches × 4 feet 3 inches, extreme sizes	V^3

East Area.

2	Trusses to Lloyd's doorway, including the moulded panels	W^3

Tower.

222 feet sup. Carving in imitation of scales or lozenges on face of dome . . . .

16 9 inches run leaf enrichment to torus, 10 inches girt, as . . . . F^4

No.

4 Ornamental keystones, with leaf enrichment and baluster-moulded face, 4 feet 2 inches high, 2 feet extreme width, and 15 inches projection, including sides . . . . X^3

8 Capitals to pilasters, 3 feet 7 inches diameter at neck, with two returns, 2 feet 3 inches each, consisting of one tier of raffled leaves, 22 inches high, and including moulded abacus 12½ inches girt . . . . Y^3

8 Vases . . . . Z^3

4 Circular bands round clock-face, 8 feet diameter and 24 inches girt, including riband ties on each side, and making good sunk face to same . . . . A^4

8 Rolls, 2 feet 1 inch long, and 5 inches diameter, with 2 scroll ends to each . . . . B^4

16 Spandril ornaments, 1 foot 8 inches × 1 foot 8 inches extreme size, including connecting tie . . . . C^4

12 Riband ties to circular enrichment, 1 foot 11 inches girt, including making good moulded face to same . . . . . . D^4

8 Pendant enrichments, 10 feet long, 15 inches extreme width, and 5 inches projection F^4

8 Corinthian capitals to columns, 1 foot 10 inches diameter at necking, and 2 feet 9 inches high, including moulded abacus . . . . .

Provide for the payment of the sum of 9691*l.* 14*s.* 9*d.*, for the cost of such *carving and sculpture*, and a further sum of 3500*l.* for additional sculpture; also a further sum of 500*l.* for *modelling* for carving and sculpture; besides all materials and stone for the carving enumerated in the schedule above written; but not the stone for the sculpture of the panels in attic of south front, for which he is to provide only plain ashlar panels, and no materials for the modelling; the two sums of money, 3500*l.* and 500*l.*, are to include the cost of extra thickness of stone and materials for modelling.

All the *work* to be put together in the soundest and most workmanlike manner; all parts being housed and fitted, and all joints secured with cramps, joggles, plugs, and other needful and proper articles. All *horizontal joints* to have one or more slate joggles, with mortices in upper and lower stones; the *slate joggles* to vary from 1½ inches to 2½ inches; the large stones of columns and pilasters of portico to have similar *joggles of York stone*, 4 inches × 4 inches × 4 inches. The joints of columns and pilasters of portico to have milled lead, cut and fitted, and laid to the extent of 77cwt. 3qrs. and 7lbs. The carved pendants to modillions in Corinthian entablature to all parts except the face and returns of portico, to be cut out of separate stones, and secured and fixed with copper spindles, 6 inches long, run with lead. The *masonry of tower*, also, to have 16 similar spindles, 8 inches long; and the balustrades will require 2 others, 2 feet long. All the upright joints to be cramped with 1 or more cast-iron *cramps*, varying from 6 inches to 9 inches, let in and flushed and covered with Roman cement; and part of the upright joints, as will be directed, to have plugs, run with lead.

Cut 74 20-inch bevil sunk letters, in Roman capitals, in the frieze of the Corinthian order.

MASONRY IN GRANITE TO THE FAÇADES.

The *granite* to be the best granite from the *Fogging Tor*, *Penrhyn*, or *Aberdeen* quarries, of a fine grain and even colour throughout, being entirely free from large crystals of quartz or felspar, as well as from redness or stains.

Every stone to be *fine axed* on the external face, so as to present a fair and perfectly even surface, at least equal to a sample now upon the ground, which has been approved by the Architect.

The *beds and joints* to be full and square for their whole depths, particular care being taken to preserve the outer arrisses, so that when the work is set it may be close and solid throughout, without any packing; and no joint is to exceed ⅛-inch in thickness. The backs are to be thicknessed square with the beds, so as to present a fair surface against the brick backing.

The *granite work* throughout is to be laid on a thin bed of mortar, prepared as hereafter described, the face of the joints being pointed, and the rest grouted full with mortar.

The *stones* to be set with lewises and proper tackle; all the arrisses and angles are to be very carefully kept, and the lines of mouldings, and the mouldings (which latter are to be, in all cases, worked out of the solid) are to be wrought to their true and proper form.

The *mortar* is to be composed of one measure of fine ground genuine Italian *pozzolano*, two equal measures of clean river sand, and one equal measure of good, fresh burnt Dorking lime, mixed with water, and well worked to a proper consistency, and, in that state, ground with edge-stones.

West Front.—The pedestal course to this façade, including the great pedestals each side of steps to portico, will be executed with Fogging Tor granite; the great pedestals in 3 courses; top or surbase, 83 inches × 15 inches; the end stones, 4 feet 4 inches long; and stones under pillars, 5 feet 1 inch long, and only one stone between pillars; the dies 31 inches × 13 inches on each face; part of the inner face will be 19 inches × 13 inches; the end stones to be 67 inches × 47 inches on bed; the plinth 42 inches × 21 inches, to return inside only part of the length; the end stones to be 73 inches × 27 inches on the bed. The north and south flanks of pedestal to be also in three courses; surbase 27 inches × 15 inches; die, 31 inches × 21 inches; and plinth, not moulded, 40 inches × 21 inches, being 2 inches less in height than the great pedestals. The *quoin stones* of surbase will be 75 inches × 82 inches, on bed; the quoin stones of dies, 34 inches × 36 inches; and the quoin stones of plinth, 71 inches × 30 inches, on bed.

South Façade.—The west quoin pedestal to be Fogging Tor granite, and to correspond in every respect with pedestals of the flanks of west façade. The remaining pedestals will be of Penrhyn granite. The two *pedestals* to central pilasters will be in 3 courses; surbase in 2 stones, together 7 feet 6 inches × 6 feet 5 inches × 1 foot 3 inches; die in two stones 7 feet ½ inch × 2 feet 10 inches × 2 feet 4 inches; plinth in 2 stones, together 6 feet 6 inches × 7 feet 8 inches × 2 feet 4 inches. The *plinth course* to one will be 2 feet 1 inch high only. The pedestals to the other two of the four central pilasters will be in 3 courses; surbase in 2 stones, 6 feet 5 inches × 3 feet 5 inches, and 4 feet 2 inches × 3 feet 3 inches, both 1 foot 3 inches high; the die in two stones, one 7 feet 1 inch × 2 feet 10 inches × 2 feet 7 inches, and one 2 feet 10 inches × 3 feet × 2 feet 7 inches; the plinth in 2 stones, one 6 feet 6 inches × 3 feet 6 inches × 2 feet 7 inches, and one 4 feet 2 inches × 3 feet 3 inches × 2 feet 7 inches. One of these pedestals will have the plinth stones 1 foot 10 inches high, instead of 2 feet 7 inches. The 8 other pedestals will be each in 3 courses; surbase, 6 feet 5 inches × 4 feet 7 inches × 1 foot 3 inches; dies to 4 of them 5 feet 7 inches × 2 feet 11½ inches × 2 feet 7 inches; dies to the other 4, 5 feet 7 inches

× 2 feet 11½ inches × 2 feet 2 inches. 8 plinths, 5 feet 9 inches × 4 feet 3 inches and 2 feet ½ inch average height.

The east quoin under 2 whole pilasters and 1 semi-pilaster, will also be in 3 courses; surbase, 1 foot 3 inches high in 3 stones, one 25 inches × 55 inches, and two of them 82½ inches × 55 inches; the die 1 foot 9 inches high in two stones, one 39 inches × 36 inches, one 62 inches × 48 inches, and filled in with 14-inch granite, 6 feet 11 inches long in three stones; the plinth 1 foot 8 inches high, in four stones, one 24 inches × 51 inches, two 57 inches × 18 inches, and one 45 inches × 63 inches.

Circular Corners.—4 plain *Penrhyn granite* pedestals will be required, each in 1 stone, 39 inches × 54 inches, and 52 inches high; the faces circular. The pedestals to the half-pilasters of these circular corners are described with the pedestals of the other façades.

East Façade.—The pedestals to this front will be of *Penrhyn granite.* The north and south quoin pedestals, including half-pedestals under semi-pilasters of the circular corners, will be in 3 courses; surbase 5 inches thick in 2 stones, 71 inches × 38 inches, and 29½ inches × 38 inches; die in 2 stones, one 67 inches × 36 inches, and 19 inches high, and one 32 inches × 36 inches × 26 inches high; plinth in 2 stones, one 72 inches × 42 inches, and 27 inches high, and one 26 inches × 37 inches, and 22 inches high. The pedestals under the 2 pillars in centre will be each in 3 stones; surbase 72 inches × 72 inches × 5 inches; die 67 inches × 67 inches × 19 inches; plinth 79 inches × 79 inches × 26 inches. The pedestals to the other 2 pillars and quarter pilasters adjoining will be—surbase, 84½ × 72 inches × 5 inches; die in 3 stones 19 inches high, one 67 inches × 26 inches, one 41 inches × 34 inches, and one 37 inches × 19 inches; the plinth in 2 stones 2 feet 2 inches high, one 79 inches × 39½ inches, and one 52 inches × 68 inches. The 2 other pedestals under pilasters will be each in 3 stones, one 71 inches × 38 inches × 5 inches, one 67 inches × 36 inches × 19 inches, and one 72 inches × 42 inches × 26 inches.

North Façade.—The east quoin pedestal will be like the east quoin pedestal of south façade, but it will be of *Aberdeen granite,* and the plinth stones 1 foot 8 inches high.

Pedestals.—The west quoin *pedestal* will be *Fogging Tor* granite, and will be similar to north flank pedestal of the west front. All the other pedestals of this front will be of Aberdeen granite. The 8 pedestals under piers will be each in 3 stones; surbase 62 inches × 32 inches × 20½ inches high; die 56 inches × 15 inches, and

21 inches high to 4 of them, and 26 inches high to 4 others; plinths 59 inches × 30½ inches, and 21½ inches high. The dies of these pedestals to be 1½ inch thicker as herein described, and margins 5 inches wide are to be sunk round them 1½ inch deep, and the central parts finished rock work. The double pedestals, east and west quoins of centre, will be the same, excepting height of plinth, which in one is 30 inches, and in the other 40 inches. These will be in 3 courses each; surbase in 2 stones, one 77 inches × 55 inches × 15 inches, and one 55 inches × 25 inches × 15 inches; the die in 2 stones, one 72 inches × 36 inches × 21 inches, and one 30½ inches × 36 inches × 21 inches; the plinth in 2 stones, one 75 inches × 53 inches, and one 53 inches × 27 inches. The other four pedestals will also be each in 3 courses, and the same height as last, but the plinths will vary from 34 inches to 38 inches in height; surbase in 1 stone 77 inches × 45 inches; die in 1 stone 77 inches × 39 inches; plinths in 1 stone 77 inches × 42 inches.

All these pedestals to be moulded, as is shown in the drawings; and the mouldings are to be mitred and stopped against plinth. Plinths sunk out adjoining the shop fronts, and the pedestals to be sunk out, rebated, and back-jointed for those shop fronts, in some cases to be backed by brickwork, and in other cases left for plastering. The joints in beds to have York joggles 3 inches × 3 inches × 2 inches, with mortices sunk in both stones, and the joggles set in cement. 524 joggles in all will be required for this.

Provide and fix 12 piers in the great vault to carry arches, each in 1 stone, 6 feet 6 inches high and 2 feet 3 inches square; and the faces to be plain axed, and the top bed sunk for skew-back. *These piers to be Penrhyn granite.*

Provide also of similar granite, and set them in basement walls, 84 granite springers, 33 inches × 27 inches × 18 inches, sunk and plain axed to proper form, as will be directed.

Pavement.—Lay the open area with *Peterhead granite* 7 inches deep, and 5 inches wide, all neatly dressed and sized, and laid in regular circular margins, as will be directed, and as shown in Drawing No. VII.—to be laid on a bed of concrete 6 inches thick, floted to a fair surface, and covered with a layer of *Claridge's patent asphalte* 1 inch thick, and with a bed of sand 3 inches thick, and grouted with lime and sand. This paving to be laid with currents, as will be directed, and to be trimmed and back-jointed to the cast-iron gutter round area, and to 6 iron frames, for which the Contractor is to allow the sum of 10*l.* prime cost, and to fix them with the paving. It is intended that the *Turkey stones* saved from the fire, as far as they are fit, shall be laid in this area in regular circular margins, intermixed with the Peterhead granite; and the Contractor shall make an allowance by way of deduction for the saving of the cost of part of the Peterhead granite, which will not then be required.

The Contractor to execute granite plinths to great piers in east area, and other works in granite, of the prime cost value of 200*l.*

INSIDE PAVING, STEPS, AND STAIRCASES.

Basement.—The great cellar, its recesses and passages in the basement, to be laid with 3-inch tooled York paving. The coal vaults with 2½-inch self-faced paving. All other parts of the basement not otherwise covered, to be laid with 2½-inch tooled York paving. This paving to be laid on concrete (to be provided and laid by bricklayer) in regular courses, neatly notched to piers, close jointed, and bedded and flushed with mortar. The paving to be fair back-jointed to flooring which meets it.

Ground Story.—Pave the two entrances and staircases of the Royal-Exchange Assurance offices with 3-inch Portland. Fix in the southern entrance 6 Portland moulded steps 10½ inches clear width from riser to riser, with 2½-inch nosing in addition, and 6 inches clear rise, rebated and back-jointed. The middle pieces of the 3 bottom steps in long lengths. The landing at the top of these steps to be formed of 3 pieces of 6½-inch Portland, with moulded and mitred nosings to correspond with steps. Fix Portland plinths under 2 of these landings, 1 foot 6 inches high, and 2 feet 3 inches bed. Fix round side and two ends of opening for staircase to basement Portland curbs 12 inches × 7 inches, back-jointed to paving, and to form top step of the basement staircase. Pave the entrance of the London-Assurance offices with 4-inch rubbed York landing paving, and fix similar curbs, but of rubbed York, round opening of staircase to basement. Fix in entrances to great public vault, each side of tower, 7-inch rubbed York landing, pinned in 7 inches, and the joints joggled and run with lead; the outer edges fair, and rebated for steps above and below.

The entrance to the Unappropriated Offices on the north side to have similar paving and curb to that which has been described for the staircase and entrance of the London-Assurance offices. Pave the two entrances and staircase of the Banking-house in north-west angle with 3-inch Portland, and fix Portland curb, 12 inches × 7 inches, to side and two ends of opening for basement staircase. Fix in doorway from staircase to Banking-house 2 steps, and in the north entrance 4 steps, to be moulded, and to be 10 inches × 6½ inches net.

Fix to outer entrance doorway to Lloyd's entrance and staircase 8-inch rubbed and back-jointed *Craigleith step* in 3 stones; the middle stone 88 inches × 39 inches, and each end stone 36 inches × 25 inches; mortices to be cut for door frame and for two scrapers, and the joints to have double plugs and lead. Pave the staircase with 3-inch *Craigleith paving* in courses bedded and jointed in mortar, and form fair edge next opening for basement stairs.

Fix to the shop and office fronts in the 3 façades, and in east area, 115 feet 1 inch cube Portland, with all labour, in plain plinths and steps, part in long lengths, and cut mortices for wood frames and sockets for bolts, the joints being plugged and run with lead. Fix also to the same fronts 155 feet lineal of York curb 9 inches × 9 inches, and 11 feet lineal of similar curb to circular corners, the whole jointed, with mortices cut for doorposts; and fix, in addition, 8 tooled York bases 9 inches × 9 inches × 6 inches, with a mortice in each.

Mezzanine Story.—3-inch rubbed *York paving* to strong room of the Royal-Exchange Assurance offices. Similar paving to retiring room adjoining Lloyd's staircase.

One-pair Story.—All parts of this story, not floored or otherwise covered, to be paved with 3-inch *Portland paving*, bedded and jointed with fine mortar on solid brick spandrils.

Fix to basement *doorways steps* as follows:—2 York tooled steps, 14 inches × 6 inches, in Royal-Exchange Assurance, 1 long ditto with the joints plugged and run with lead, and two others 4 feet 3 inches long. Fix to doorways on Lloyd's basement 1 step 27 inches × 6 inches, and 2 steps 31 inches × 6 inches. Fix in basement of Banking-house 3 steps 14 inches × 6 inches; and in basement of the Unappropriated Offices 1 long step 14 feet × 6 inches, with 2 joints plugged and run with lead. Fix to doorways to 33 rooms under shops 13 steps 5 feet 6 inches × 14 feet × 6 inches, and 17 steps 9 feet 6 inches × 1 foot 2 inches × 6 inches, with 2 joints in each plugged and run with lead. Fix also 2 steps 27 inches × 6 inches in doorways of great vault.

Fix to doorways, ground-story, steps as follows:—Rubbed York steps, 30 inches × 4 inches, and 6 feet 6 inches long, to doorways from west entrance to Ambulatory; also similar steps, 4 feet 4 inches long, 12 inches × 7 inches to the 4 entrances in east entrance archway under tower.

Fix 2 sets of *rubbed York jambs*, head, and sill *for iron door*, 9 feet × 6 inches with joggled joints, and rebate 2 inches × ½ inch, and grooved for deal linings in the offices of the Royal-Exchange

Assurance. Fix a similar set of jambs, head, and sill, with similar work, in the Unappropriated Offices. Fix also a similar set in the offices of the London Assurance, and in the Banking-house, and 2 sets in Lloyd's rooms, making 7 sets in all. They are each to be in 4 stones, and from the *Parkspring* Quarries. Cut all mortices for door frames throughout, and all bolt holes, and all holes for boxes of spring hinges. All the steps to be back-jointed, and to have tooled ends, and all the ends to be let into the brickwork, and to be well pinned and made good with cement.

Fix to the two *windows* in basement, south side, *tooled York sills*, 9 inches × 6 inches, and to the windows of rooms under shops in east area 2 York sills, 19 inches × 6 inches, and 4 ditto 28 inches × 6 inches; and fix to window of water-closets in basement of Banking-house a York sill, 9 inches × 6 inches, and 7 feet 4 inches long. Fix to 6 back windows on second story Portland sills, 9 inches × 6 inches. All these sills in York and Portland to be *sunk and throated* with fair ends, and made good to brickwork.

TEMPLATES AND SUNDRIES.

Ground-floor.—Generally set a *template* of tooled York 12 inches × 9 inches × 3 inches under all the iron shoes. Fix other templates as follows, of tooled York cut to sizes given, and large mortices cut for iron beams. Four in south-west angle offices, 24 inches × 18 inches × 4 inches, and 1 for pillar 22 inches × 22 inches × 6 inches. Fix in north-west angle offices 2 templates, 24 inches × 18 inches × 4 inches, and 2 bases for pillars, 22 inches × 22 inches × 6 inches; 2½-inch tooled York coverings to piers built to carry slate cisterns to be fixed in the basement-story. Fix 4 templates under iron beams in ceiling of retiring-room adjoining Lloyd's staircase on the ground-story, 24 inches × 18 inches × 5 inches.

Mezzanine Story.—Fix 6 York *templates* to floor in south-west angle, 24 inches × 18 inches × 4 inches, and 2 similar in floor of north-west angle, and 4 similar under bearers of floor of retiring-room adjoining to Lloyd's staircase. Generally provide and fix, in this and other floors 153 York templates, 9 inches × 9 inches × 3 inches, to receive ends of trimmers or other timbers, in chimney breasts, or other places which may require them.

One-pair Floor.—The main and other iron beams over the ambulatory, will bear on York bond-courses to be hereafter described. Fix to floor in offices in south-west angle 5 templates, 24 inches × 18 inches × 4 inches, and also lay 6-inch tooled York on iron beams under chimney breast, 9 feet 7 inches × 1 foot 11 inches.

Fix on walls and iron bearers over the staircase 7-inch tooled York landings, 12 feet 6 inches × 6 feet 9 inches. Fix templates, 24 inches × 14 inches × 4 inches, under ends of iron beams which support steps across openings in staircase wall.

Roofs and Flats.—Provide 60 feet superficial 4-inch York templates, to be laid where the Architect shall direct, in walls for plates of roof of Subscription-room, Captains' room, and lobby, and perforate 10 holes in it for flues; allow, in addition, 20 feet superficial of similar templates for the walls round roof of court-room of the Royal Exchange Assurance, and 4 perforations in it for flues. Allow for 2 York templates, 36 inches × 24 inches × 5 inches, for iron bearer under roof of the London Assurance. Fix 2 York templates, 48 inches × 24 inches × 5 inches, for girder under flat and roof in north-west angle. Fix 2 templates, 36 inches × 18 inches × 5 inches, under iron beam over one side of Lloyd's Reading-room, and 2 similar templates for ends of beam under roof at east end. Fix 3 templates, averaging 4 feet superficial, of 5-inch York, on walls round bar and Captains' room, and allow for 3 holes in flues cut therein. Fix 6 York templates, 36 inches × 18 inches × 5 inches, for iron beams of flat over Lloyd's staircase. Six similar templates under ends of iron beams over Captains' room. Fix 2 templates, 30 inches × 18 inches × 5 inches, under beam at east end of roof of the London Assurance office.

Great span-roof west end: 6 York templates, 48 inches × 27 inches × 9 inches; 22 other templates averaging 42 inches and 27 inches × 6 inches, and allow for 4 perforations for York in them.

Sundries connected with Water-closets.—Fix 2½-inch tooled York covering on the piers under the slate cisterns on basement. Fix 4-inch York covers 21 inches square over 135 curved shoots for traps and pipes into drains, with a pipe-hole in each, cut and rebated all round, 2 inches wide, for flanch of pipe.

Fix templates, 18 inches × 14 inches × 5 inches, for the ribs forming the quadrant brackets under ceiling of ambulatory. Fix 4 templates, 24 inches × 18 inches × 5 inches, under iron beams, which carry arches to ceiling over entrance to ambulatory from east area.

All the above bedded in *Roman cement*, cut to fit, with caulking holes cut in them.

Provide and bed 13,000 feet superficial 3-inch hard, tooled York, 4000 feet superficial of 4-inch ditto, and 6000 feet superficial of 5-inch ditto in bond courses and coverings, varying from 24 inches to 36 inches in width, and from 30 inches to 60 inches in length; the edges to be cut to fit, and the same to be secured with 3018 cast-iron 10-inch cramps and cement, and to have 300 large caulkings cut in the same for iron beams. The bond courses to be bedded in Roman cement.

Find and bed, beyond what is shown and directed, 204 York templates 9 inches × 9 inches × 3 inches, and 76 ditto 13 inches × 16 inches × 5 inches, and long mortices cut in 34 of them.

Cut all holes in masonry for pipes, and allow for the same, beyond pipe holes described, the sum of 30*l.*

STAIRCASES.

Execute, in *Portland stone*, the following staircases :—

One to the London Assurance Offices.—This staircase to be in two flights to the first floor. No. 1, solid, wide bottom step, 1 solid step on it, 20 fliers, 28 winders, and 2 landings ; the steps and landings 5 feet 3½ inches out of the brickwork, and 8½ inches in brickwork, pinned in with cement ; the clear width of tread to fliers, 10½ inches from riser to riser, and the moulded nosings to all to project 2½ inches ; the winders to be as wide as the space will admit, and to be finished with circular ends next well-hole ; the two bottom steps to have moulded nosings, both faces with semi ends. Plain fair soffits to steps and landings ; the landings 7½ inches thick ; the top landing in 3 large stones, with joints joggled, and run with lead. Cut mortices for iron railing, back-joints to flooring and paving, and rebated joints to all steps, including landings. The staircase to be carried up to the second floor, the same as below, excepting that the steps are to rise 7 inches instead of 6½ inches, with 10-inch net tread, and nosing projecting 2 inches only. All other points similar.

One to the Unappropriated Offices, North Side.—This staircase to be similar in construction to the staircase to the first floor of the London Assurance offices, but smaller ; the steps and landings 4 feet 3 inches out of wall, and 8 inches in wall, and the ½ spaces and landings as shown in the drawings. The width of tread and rise, the moulded nosing, and the 2 bottom steps, will be similar to the former ; to comprise 3 landings, 2 bottom steps, 19 fliers, and 30 winders.

One to the Royal Exchange Assurance.—To be like the London Assurance, but the rise to be 6 inches only. The landing, mezzanine floor, to be in 4 stones 7 inches thick, and the staircase continued to the first floor ; one of the winders to be of extra width, to give access to water-closets ; 7-inch landing in one-pair floor, in 5 large stones, and moulded step to be fixed in large opening on west side.

One to the Banking-house.—This to ascend to mezzanine floor only; the steps 10 inches × 7 inches, net width and rise, and nosing to project 2 inches; the steps 3 feet 7 inches out of wall, and average 7 inches in; the landing to be 5 inches thick, with a riser; 12 steps, 15 winders, and 1 landing. To fix paving to match in all doorways.

Execute in *Yorkshire stone staircases* as follows:—

Those to the basements belonging to the Royal Exchange Assurance, the London Assurance, the Banking-house, to the Unappropriated Offices, and to the basement of Lloyd's—in all, 5 staircases. These are all to be of plain *tooled York*, as shown in the plans. The bottom steps to bear on brick footings, and all other steps to be pinned in in Roman cement. There are to be 20 risers to all; 1 riser is already provided in the description of the paving on the ground-story; and each of these staircases is to consist of 19 steps, part fliers and part winders; the dwarf walls, under bottom steps, to be 2 courses, in 3 bricks, and 3 courses in 2½ bricks, the ends to be tooled fair, the joints rebated, and mortices to be cut for iron railing; the treads of fliers 10½ inches net, and rise 7½ inches net. The steps 3 feet 6 inches out of wall, and 9 inches in. The steps to the basement staircase of the Banking-house 3 feet 1 inch only out of wall, and the footings under bottom step 1½ brick instead of 2½ bricks; and so on the same.

Construct *staircases of York stone*, from the great vault to ground-floor, and from thence, with Portland stone, to offices on the mezzanine floor each side of tower. (*See* the plans.) The stairs to basement to be tooled York, with fair tooled soffit. The stairs to mezzanine story to be rubbed with fair tooled soffit. The landing, ground-floor, to be formed of 7-inch rubbed York landing, pinned in 7 inches, and the joints to be joggled and run with lead. The Portland steps to have 10½-inch net tread, and 7-inch net rise, and to be 3 feet 8 inches out of the wall, and 8 inches to be pinned in in Roman cement. Fair-tooled soffit to landings, ground-floor.

Construct *staircase* to Lloyd's rooms of *Craigleith stone*, the steps 12 inches net tread, from riser to riser, and 6¼ inches net rise, with moulded nosing, projecting 2½ inches, and the soffit of the steps to be cut and moulded. The staircase to consist of 2 bottom steps, with semi ends, 5 quarter-spaces, 45 fliers, and 1 great landing. The steps, 7 feet 9 inches out of wall, and 9 inches in; the quarter-spaces 9 feet square, each in one stone; the landings, one pair, 7 feet 2½ inches out of wall, and 9 inches in; the bottom steps 10 feet 2 inches × 3 feet 5 inches, and 6½ inches thick; the second step, 9 feet 3 inches × 1 foot 5 inches, and 6¼ inches thick. These to have semi ends, and to have moulded nosings on both faces; the fliers out of stones 8 feet 6 inches × 1 foot 5 inches × 8 inches; the quarter-spaces 8 inches thick. No. 16 panels, 3 inches deep, to be sunk in quarter-spaces and one-pair landing with a moulding worked round them 4 inches girt. The one-pair landing to be in 3 stones, 2 equal to 13 feet 5 inches × 8 feet 6 inches, collected, and one 3 feet × 8 feet 6 inches. Work 5 lengths of 1¼-inch flush bead in soffit of landings.

All these staircases to be made complete, making good to flooring and paving; and 3-inch paving, to correspond with staircases and landings, to be fixed in all doorways. All joints in landings to be joggled and run with lead, and all ends of steps finished to correspond with fronts, mitred and stopped where needful. All requisite holes and mortices to be cut.

SLABS AND HEARTHS.

Basement.—Lay rubbed *York hearths* to 3 chimneys, and also 2-inch Portland slabs, one 54 inches × 20 inches, and the other 66 inches × 24 inches.

Ground-story.—Lay 2-inch rubbed *York hearths* to all chimneys. Lay a 4-inch *rubbed York slab,* 48 inches × 48 inches, for stove in Banking-house, and also inch veined marble slabs, 54 inches × 24 inches, to the chimneys in the rooms adjoining. Fix in all the shops 3-inch rubbed York slabs, 36 inches × 24 inches, for stoves.

Mezzanine Story.—2-inch rubbed *York hearths* to all chimneys. Lay 2-inch *Portland slabs* as follows:—one 66 inches × 24 inches, and one 51 inches × 18 inches to offices, south-west angle; two 54 inches × 21 inches to rooms adjoining tower walls; and two 58 inches × 24 inches to rooms in north-west angle. A 3-inch rubbed York slab in scullery, 48 inches × 30 inches; and 1 in kitchen, 60 inches × 24 inches. Fix, in all other rooms over shops, slabs similar to such as have been described for shops.

One-pair Story.—2-inch rubbed *York back-hearths* to all chimneys. Fix in Royal Exchange Assurance offices six 1¼-inch veined marble slabs, three of them 60 inches × 21 inches, one 60 inches × 24 inches, and one 66 inches × 24 inches; also one 1½-inch similar slab in court-room, 84 inches × 30 inches; also five 2-inch *Portland slabs,* one 43 inches × 20 inches, two 51 inches × 20 inches, and two 57 inches × 20 inches. Fix in offices of the London Assurance, four 1¼-inch marble slabs, 66 inches × 24 inches, and two others, 60 inches × 24 inches; also three 2-inch Portland slabs, 60 inches × 24 inches. Fix in Lloyd's rooms 2-inch rubbed York hearths to all the chimneys; and four 1½-inch veined marble slabs, 78 inches × 30 inches; and also four 1¼-inch veined marble slabs, 60 inches × 24 inches, and two 2-inch Portland slabs, one 69 inches × 24 inches, and the other 60 inches × 20 inches. Fix in rooms of the Unappropriated Offices in north-west angle rubbed York hearths to all the chimneys, and three 1¼-inch veined marble slabs, one 72 inches × 27 inches, one 66 inches × 24 inches, and one 54 inches × 24 inches; also three 2-inch Portland slabs, one 54 inches × 20 inches, and two 60 inches × 20 inches.

Second Story.—Fix to chimneys in rooms connected with the Royal Exchange Assurance 2-inch rubbed *York hearths*, and eight 2-inch *Portland slabs*, averaging 52½ inches × 20 inches. Fix to six chimneys in rooms attached to the London Assurance offices similar hearths, and 2-inch Portland slabs, averaging 52 inches × 20 inches. Fix to the two chimneys of upper rooms of Lloyd's similar hearths, and 2-inch Portland slabs, 54 inches × 20 inches. Fix in rooms in north-west angle, similar hearths, and 2-inch Portland slab 54 inches × 20 inches.

Chimney-pieces, &c.—Fix to three chimneys on basement and one in kitchen on mezzanine floor, and two on one-pair story, and two on the second story, *viz.* eight in all, 2-inch Portland jambs 9 inches wide, and haunched mantels 10 inches wide with fair edges and proper cramps. Fix also in the 36 shops, and in the 36 rooms over them, 1½-inch Portland slabs 3 feet × 3 feet, with fair edges, and holes cut for iron flue-pipes; all these to be securely cramped. Fix in other rooms 25 Portland chimney-pieces of the prime-cost value together of 62*l.* 9*s.* 6*d.*; also 27 marble chimney-pieces of the prime-cost value together of 635*l.* 15*s.*; also three sets of marble linings for stoves, of the prime-cost value together of 15*l.* 15*s.* These prime-cost values to be exclusive of cartage and fixing.

Provide and fix the following masonry in forming areas, kerbs, and landings to shop doors, and other works to the outside of the façades.

Ft.	In.			£ *s.* *d.*
1326	0	sup.	6-inch rubbed York in landings, to doorways, area kerbs, steps, &c. .	
318	0	„	Plain work to joints	
331	0	„	„ rubbed to edges . . .	
54	0	„	Sunk work to edges	
93	6	„	Circular plain work, rubbed . .	
260	8	run.	Rebate and back joint . . .	
168	0	„	Cutting and pinning	
	No.	214	Corkings cut for gratings . . .	
	„	82	Double plugs and lead . . .	
	„	38	Cutting holes for scrapers . . .	

		£ s. d.
No. 8	Stones 36 inches × 36 inches × 4 inches, for coal-plates, and a rebate hole in each	
	Provide for sundry cutting and notching to plinths	10 0 0

External Pavings and Steps.—The *granite paving* of great area is described. To fix round the same 6-inch *Craigleith landing,* laid with a fall and back-jointed to cast-iron gutter, to be in large stones 5 feet net width, and the angle stones 6 feet 1 inch square, extra sunk on the top and back-jointed for step of ambulatory. To fix all round ambulatory wide Craigleith step, rebated for landings last described and back-jointed, for paving of ambulatory. This step in long lengths, 2 feet 9 inches wide and 7 inches thick. To lay the ambulatory with 5-inch *Parkspring landings* in large stones, as is shown in Plan No. 2, and with margins and squares formed by 2-inch *Kerry slate* stone 18½ inches wide; the whole to have fine joints, and to be cut and fitted as shown in the drawing.

The *steps of portico to be Craigleith,* 16 inches × 7 inches, with rebated back joints. The top step to be 6 feet 9 inches wide, in 7 large stones, and kerbs 12 inches × 7 inches, of Craigleith, to be fixed in front of columns. The whole of the portico and west entrance to be paved with 5-inch *Parkspring landings,* in large square stones, as is shown in Plan No. 2. The other entrances, that is the south, north, and two at east end, to have Craigleith steps, 16 inches × 7 inches, in long lengths, and 5-inch Parkspring landing paving in large stones. Some of the steps will be wider, as is shown in the drawings, and as will be directed.

The east area to be paved with 5-inch *Parkspring landings,* in large stones, laid to currents, and cut 4 holes for pipe-heads in the same.

Work.—All these pavings and steps to be rubbed and laid with great accuracy in regard to levels and joints; the joints to be fine chiselled, and the whole set and jointed with fine mortar. The steps bedded solid in brickwork built for that purpose. All the pavings to be laid upon a bed of fine concrete 6 inches thick, laid, beaten down, and floted to a fair face. The pavings and landings in the two open areas to have also a coat of *Claridge's asphalte* laid under them, 1 inch thick. Fix grates and pipes to carry off water from east area, of the prime-cost value of 35*l.*

Provide and fix 10,000 feet cube of Portland stone, where the Architect shall direct, including all labour in working and setting;

and to execute this, or other work equivalent thereto, to the extent and value of 3000*l.*

All works hereinbefore described to be done, and for which certain specified quantities are given, are to be measured; and any excess or deficiency therein in quantity or value shall be allowed according to the terms of the contract.

CARPENTER.

MATERIALS.

All timber used in this building of foreign growth must (if required) be delivered whole on the premises prior to its being sawn into scantlings, for the inspection of the Architect, or his Clerk of the Works. The whole of the timber (excepting where it is specified to be oak) is to be sound yellow Memel, Riga, or Dantzic *fir timber,* free from sap, shakes, and loose or large knots. The *oak timber* is to be English growth, sound, and well seasoned, cut die square, and free from sap or other defects. The *deals* to be the best yellow Christiana, sound, hearty, and clean.

Perform all the carpenter's work shown in the drawings and herein described, and also all carpenter's work necessary to complete other trades and the intended buildings.

ROOFS.

Lloyd's: Commercial Room.—Span roof, with rising ridge and 2 small hips east end; plate 8 inches × 6 inches all round; 6 framed principals, cast-iron corbels, tie beams 13 inches × 8 inches, oak queens out of 10 inches × 8 inches, principals 10 inches × 8 inches, straining beams 11 inches × 8 inches, braces 8 inches × 6 inches; all to have straining sills 8 inches × 4 inches, and 3 of the principals to have 2 extra braces each. Two 1-inch bolts to feet of principals; 3 trusses to have inch suspending bolts; the oak queens to have stirrups 78 inches long, 2½ inches × ½ inch, with keys and wedges. Pole-plates 12 inches × 7½ inches; 4 tier of purlins 10 inches × 5 inches; return plate 10 feet long, 5 inches × 4½ inches, notched to pole-plates at angles, and 2 tier of plates or templates 5 inches × 4½ inches for purlins; ridges 8 inches × 2 inches, hips 11 inches × 2 inches. The north and south gutters 18 inches wide, principally parallel, but the highest parts partly on slope. The small gutters as shown. Blockings to purlins, straps 4 feet long, 2 inches × ½ inch, to hold in pole-plates to tie beams.

Roof over Subscription Room, Lobby, and North-west portion of

Captains' Room.—To be a span roof hipped, with return, 6 hips and 1 valley. Wall-plate on all walls. Provide for 14 iron socket-beams (28lbs. each) on small templates as to second floor. 8 framed principals to lie east and west, with iron corbels and iron bolts and stirrups; 2 of them, *i. e.* those at the north and south ends, to be stronger, the timbers being 10 inches instead of 8 inches. All these trusses to have the extra braces and straining sill. 2 semi-trusses at each end; the timbers the same scantling in depth as the other trusses, and 8 inches thick. 1 oak queen to each, and the straining beams framed into the oak queens of the main trusses, and bolted to them with inch bolts 2 feet 6 inches long. Iron corbels, bolts, and stirrups to these trusses as to the others, and 4 cast-iron saddles to receive the ends to weigh 84lbs. each, bolted to main tie-beams, each with two 1-inch bolts 13 inches long, and 1 tie-beam bolted to the other with inch bolts 3 feet long, with strap ends and staples.

2 king-post trusses across Captains' rooms; tie-beams 9 inches × 4 inches; principals 8 inches × 4 inches; oak king-post out of 7 inches × 4 inches; $\frac{3}{4}$-inch bolts to principals; stirrup to kings 4 feet 6 inches × 2 inches × $\frac{5}{8}$ inch, valley 10 inches × 4 inches; inch boarding to valleys 6 inches wide.

Lloyd's Reading-room.—2 queen-post trusses to lie east and west; tie-beam 13 inches × 10 inches, oak queens out of 14 inches × 10 inches, principals 10 inches × 10 inches, straining beams 11 inches × 10 inches, braces 10 inches × 5 inches; 2 middle braces 10 inches × 7 inches, stirrups 72 inches × $2\frac{1}{2}$ inches × $\frac{1}{2}$ inch; $1\frac{1}{4}$-inch bolts to principals; 2-inch suspending bolts 87 inches long; cast-iron corbels as before. Six semi-trusses to lie north and south; tie-beams 10 inches × 4 inches, principals 9 inches × 4 inches, braces 4 inches × 4 inches; 6 iron saddles 56lbs., and two 13-inch $\frac{3}{4}$ bolts to each; 2 inch bolts to each of these principals; pole-plate 6 inches × 4 inches, purlins 9 inches × 4 inches, wall-plate 7 inches × $5\frac{1}{2}$ inches; 14 cast-iron bearers, 28lbs. each.

Small Roof each side of Tower.—Two king-post trusses to each; tie-beams 9 inches × 5 inches, oak king-post 8 inches × 5 inches, principals 7 inches × 5 inches, $\frac{3}{4}$-inch bolts to principals, stirrups 40 inches × $1\frac{1}{2}$ inch × $\frac{1}{2}$ inch, wall-plate 6 inches × $4\frac{1}{2}$ inches, pole-plate 6 inches × 4 inches, ridge 8 inches × 2 inches, hips 11 inches × 2 inches, purlin 9 inches by 4 inches.

Roof over Bar and Part of Captains' Room.—Wall-plate 6 inches × $4\frac{1}{2}$ inches, 3 king-post trusses, tie-beams 10 inches × 5 inches, principals 8 inches × 5 inches, oak king out of 9 inches × 5 inches, braces 5 inches × 4 inches, inch bolts to principals, stirrups 56 inches × 2 inches × ½ inch, pole-plate 6 inches × 4 inches, 1 tier o purlins 9 inches × 5 inches, ridge 8 inches × 2 inches, hips 11 inches × 2 inches.

Lead Flat over Staircase.—6 fir flitches 12 inches × 3 inches, bolted with inch bolts 3 feet 6 inches apart; no wall-plate; bridgings 10 inches × 2½ inches, gutter, south side, 12 inches wide; rolls as to other flats.

Lead Flat over Captains' Room.—6 fir flitches, and bolts as before to iron beams; circular framed plate 10 inches × 4½ inches; plate on south side only 6 inches × 4½ inches; bridgings 10 inches × 2½ inches; 10 iron beams, 28lbs. each, to carry framed plate.

London Assurance: Upper Roofs.—East Roof and Flats.—Plate all round 6 inches × 4½ inches, part circular; 18 iron bearers, 28lbs. each; 7 king-post trusses; the tie-beams to vary in length, the principals and king-posts all equal; tie-beams 12 inches × 6 inches, principals 8 inches × 6 inches, oak kings out of 10 inches × 6 inches, stirrups 56 inches × 2 inches × ½ inch; inch bolts to principals; braces 6 inches × 4 inches, pole-plate 12 inches × 6 inches, 1 purlin 9 inches × 4½ inches; 14 iron ties 4 feet × 2 inches × ½ inch; fir flitch 12 inches × 3 inches, bolted to east side of iron beam with inch bolts 3 feet 6 inches apart; bridgings 8 inches × 2½ inches; plate for ends in purlins 5 inches × 4½ inches.

West Roof.—Plate all round and on cross wall 6 inches × 4½ inches; 4 king-post trusses, tie-beams 9 inches × 4 inches, principals 7 inches × 4 inches, oak king-post out of 7 inches × 4 inches, braces 4 inches × 3 inches, stirrups 40 inches × 1½ inch × ½ inch; ¾ inch bolts to principals; 1 tier of purlins 8 inches × 5 inches, plates for ditto 5 inches × 4½, pole-plate 6 inches × 4 inches.

Royal Exchange Assurance: Small Upper Roofs.—5-inch upright kerbs against lower roof and flats, framed like the partitions, one pair, and allow 200 feet lineal of filleting 1¼ inch × 1 inch, to adapt them for slating; plate all round 6 inches × 4½ inches, level with and framed to heads of kerbs; 8 bearers, 28lbs. each. 4 king-post trusses over luncheon-room, 1 over kitchen, and 6 over the long roof; tie-beams 9 inches × 4 inches, principals 7 inches × 4 inches, braces 4 inches × 3 inches, oak kings out of 7 inches × 4 inches, ¾ inch bolts to principals; stirrups 48 inches × 1½ inch × ½ inch; 1 tier of purlins 8 inches × 4½ inches, pole-plate 6 inches × 4 inches, blockings 4 inches × 2½ inches, 12 inches apart under it on slated kerbs; valley 10 inches × 4 inches. The kerb to be continued on gables.

Portico and Building behind: Great Span Roof.—6 fir flitchings 14 inches × 7 inches, bolted with 1½-inch bolts 3 feet 6 inches apart. Fir flitches to all the 11 iron beams except the 2 short beams, 12 inches × 4 inches, bolted with 1¼-inch bolts 3 feet 6 inches apart. 11 tier of raking binders under slope 10 inches × 4 inches. Plates to all walls 9 inches × 6 inches, bridgings 7 inches × 2½ inches, 1½-inch boarding for lead, 2½-inch rounded rolls.

Span Roof over Court-room of Royal Exchange Assurance.—Plate all round 8 inches × 6 inches; 3 king-post trusses; tie-beams 11 inches × 6 inches; principals 9 inches × 6 inches; oak kings out of 10 inches × 6 inches; braces 6 inches × 5 inches; inch bolts to principals; stirrups to kings 6 feet × 2 inches × ½ inch; 4 tier of purlins 9 inches × 5 inches; pole-plate 6 inches × 4½ inches; ridge 9 inches × 2 inches; all other things as to other roofs and gutters; plates for purlins 5 inches × 4½ inches.

Lead Flat and Small Flat at South-east Angle.—The bridgings are already described with floors—everything according to general particular.

Two Span-roofs over Principal Offices of the London Assurance.—Plate and templates as last; 3 king-post principals to west roof, and 3 king-post principals and 2 semi-principals to the other; scantlings and ironwork as the last; 2 king-posts will be out of 10 inches × 8 inches, to allow extra butments, and provide 2 cast-iron saddles and bolts as before described; 1 tier of purlins to hipped roof; 2 tier of purlins 9 inches × 5 inches, and plates for the same 5 inches × 4½ inches to the other; pole-plate 6 inches × 4 inches; 2 pole-plates blocked up with blockings 6 inches × 3 inches, 30 inches apart, and fix 8 iron ties to hold them 4 feet 2 inches × ½ inch. All other things similar to other roofs. Form trough under floor, 9 inches × 6 inches inside, of 1½-inch deal, tongued, and allow 2 feet cube fir to trim floor for it; the floor over to be ledged as a flap, and screwed down; rough, sunk oak kerb, 4 inches × 3 inches, for skylight, on blockings, 4 inches × 2½ inches, 12 inches apart and 20 inches long. To form bracketing round opening, lined above flat with inch deal.

Span-roof and Flat, North-west Angle, over the One-pair Offices of the Unappropriated Set.—Bridgings of flats are taken; girder from A to B, 14 inches × 14 inches, sawn, reversed, and bolted with inch bolts, 3 feet 6 inches apart. Wall-plate all round span roof; 4 cast-iron bearers, 28lbs. each. 3 king-post trusses, like the last described. 2 tier of purlins, 9 inches × 5 inches; plates 5 inches × 4½ inches for the same; pole-plate 6 inches × 4 inches; 6 iron ties for the same 48 inches × 2 inches × ½ inch; everything else as before described. Oak kerb and blocking to elliptical skylight.

The quantity of fir timber to be used in forming hoppers for skylights in roofs is to be 205 feet, including in this quantity that, which is elsewhere already described.

All tie-beams to be each in 1 piece of timber; and generally to all the carpentry. All timbers required to be fixed, and which do not exceed 35 feet in length, to be in 1 piece.

CEILING FLOORS UNDER ROOFS.

Royal Exchange Assurance, Court-room.—5 binders, 9 inches × 3 inches, to lie north and south. Ceiling joists 4 inches × 2 inches; fifteen 1-inch bolts, 20 inches long.

Nine Rooms, Lobbies, and Landings.—Ceiling joists, 4 inches × 2 inches, to the whole; allow 100 feet cube for binders, and 10 cwt. of iron bolts and straps. Trim ceiling joists with trimmers, 4 inches × 3 inches, for 5 openings in ceiling floor, and allow 25 feet cube for quartering to hoppers to the same from skylights.

London Assurance: Five Rooms, Water-closet, and Passage.—Ceiling joists to the whole 4 inches × 2 inches. 4 tier of binders to part, to lie east and west; and 4 tier of binders to the remainder, to lie north and south, 9 inches × 3 inches; twenty-six 1-inch bolts 20 inches long.

Nine Upper Rooms, Staircase, and Passage.—3 tier of binders, some rooms, and 4 tier of binders, 9 inches × 3 inches, to the remainder. Ceiling joists 4 inches × 2 inches. Forty-five 1-inch bolts 20 inches long. Trim with trimmers 4 inches × 3 inches, to 11 openings in ceiling floor, and allow in addition, 50 feet cube for quartering to hoppers from skylight to the same.

Unappropriated Offices, One-pair.—Ceiling joists to the whole (except the parts covered with joists and bridgings), 4 inches × 2 inches. 4 binders, to lie north and south, under span roof, 9 inches × 2 inches, and sixteen 1-inch bolts, 20 inches long. Allow 30 feet cube for binders, and 2 cwt. of bolts and straps for ceilings of court and committee rooms.

Second Floor.—3 binders, 7 inches × 3 inches, and ceiling joists, 4 inches × 2 inches, to the Porters' rooms.

The Contractor is to provide, frame, and fix 1000 cubic feet of fir timber more than is shown or described elsewhere, in extra work to the roofs, flats, and ceiling floors, which the Architect may order to be done.

Provide, frame, and fix 300 cubic feet of fir in extra beams and struts which the Architect may order to be applied, in and about the roof and ceilings of the great west portico, more than is shown or described elsewhere.

Provide fir, and frame and fix ceiling floors to Lloyd's rooms, beyond what is shown or has been described, to the extent of 700 feet cube of timber, according to directions which will be given by the Architect.

Fix all extra ironwork connected with this work, to the extent of 65 cwt.

Generally to the carpentry of roofs, and also to other carpentry where it applies. Scarfed joints and inch bolts to all the larger plates of roofs. Plates in all cases to be carried round all roofs and flats. Common rafters generally to be 4 inches × 2½ inches. All *roofs for slating to be boarded* with inch yellow deal boarding, edges shot, and the boarding thicknessed. All *hips and ridges* to have 3-inch rounded holes, and proper irons. All *trimming rafters* for skylights and dormers 5 inches × 3 inches. Featheredge tilting fillets to all eaves and rakes, and round all skylights and dormers. All *lead flats* to be covered with 1¼-inch yellow boarding laid in half-deal widths, jointed and thicknessed and cleaned off, and to be raised to slopes, where required, with strong firrings blocked up. Fix 2-inch *round rolls* for lead to all flats. The *gutters* to be laid with 1½-inch deal, laid in ½-board widths, jointed, thicknessed, and cleaned off; to be laid, unless otherwise shown, with a fall of ¼ inch to each lineal foot, with 2-inch drips, 10 feet apart, carefully rebated for lead. The *cesspools* to be of 1½-inch deal dovetailed, with hole cut and dished for socket pipe, and generally cut all rebates, drips, and holes, and fix all fillets, firrings, and blockings required by Plumber and Slater. To fix to eaves of great span roof a deal moulded *trough gutter*, with moulded cornice, containing 2 feet superficial of moulding, and 10 inches of gutter board and bearers in each lineal foot, to be carried by oak brackets, 3 feet × 6 inches × 4 inches, fixed and wedged in 4 feet apart.

Work.—All joists and timbers to have as much bearing as circumstances will admit, and all timbers to be notched down, and to have solid bearings of their whole depth; the notches of the principal timbers to be dovetailed. All timbers to be strongly spiked down, and principal timbers to be secured with strong oak or iron pins. No timbers of any kind, which are to be boarded or plastered, are to be more than 12 inches asunder; all timbers to be trimmed when needful, and all trimmers, and all timbers into which they are trimmed, to be 1 inch thicker than the respective adjoining timbers, excepting where they are described to be more than this.

CARPENTER'S WORK TO FLOORS.

Basement Story.—To lay *oak joists* 5 inches × 3 inches, and oak sleepers 4 inches × 3 inches, to all water-closets, to the kitchen in north-west angle, and to the 3 rooms south-west angle.

Ground-story.—Frame a floor to Great Office in south-west angle with 3 flitches 10 inches × 3 inches, bolted to iron beams with 1-inch bolts 3 feet 6 inches apart, and joists 11 inches × 2½ inches; 2 tier of wall-plates 4½ inches × 4½ inches, to lie on offsets. Frame a floor to the Banking-house offices with 6 tier of plates 4½ inches × 4½ inches, in bank, and bridgings 6 inches × 2½ inches, and with joists 11 inches × 2½ inches in private rooms, with similar plates to lie on offsets; the trimmers to kitchen windows 4 inches thick, oak joists and plates to floors of urinals and water-closets in retiring-room adjoining to Lloyd's staircase, as to water-closets in basement story.

Frame single floors to the 9 Shops on south side, with joists 11 inches × 2½ inches, notched and spiked to plates 4½ inches × 4½ inches. Lay similar joists and plates to the 4 shops in the 2 circular corners, and fix in addition a circular trimmer, 12 inches × 4 inches, against circular walls, to receive the ends of the joists to be carried by 16 cast-iron bearers, to weigh 28lbs. each. Lay similar joists and plates to the 8 shops in east front, and also to the 11 shops on the north side. Lay joists 11 inches × 2½ inches, to lie east and west, and plates 4½ inches × 4½ inches, to private rooms of Banking-house, north-west angle, and trim them with trimmers 4 inches thick to kitchen window below. To lay all other parts not paved in this banking-house with bridgings 6 inches × 2½ inches, and 6 tier of plates 4½ inches × 4½ inches. Frame floors to the 6 shops in east area with joists 8 inches × 2½ inches, and plates on offsets 4½ inches × 4½ inches. Lay under flooring of urinals and water-closets in Lloyd's retiring-room, oak plates and joists as described for floors in basement story. All the joists deeper than 6 inches in this floor to have strong double *herringbone strutting*, not more than 6 feet apart.

Mezzanine.—Frame a floor to Royal Exchange Assurance offices, plates 4½ inches × 4½ inches to lie on offsets on north and south walls to receive ends of joists; all the plates in this story, unless otherwise described, to lie on similar offsets to be prepared by Bricklayer. Flitches 10 inches × 3 inches, bolted to iron with inch bolts 3 feet 6 inches apart; bridgings 9 inches × 2½ inches in Treasury and water-closet; joists 11 inches × 2½ inches in Accountant's room; ceiling joists 4 inches × 2 inches in office under Treasury.

The 9 rooms over shops on south side to have joists 11 inches × 2½ inches, trimmed for staircases and slabs of stoves, and plates

4½ inches × 4½ inches on set offices. The 4 rooms in north-east and south-east angle to have similar joists and plates; 3 joists in each room 3½ inches thick, and circular trimmer adjoining to outer wall 11 inches × 4 inches, to be carried by 8 cast-iron sockets to each angle.

The rooms over the shops of east façade to have similar framed floors.

The rooms over the shops in east area to have similar framed floors, but the joists to be 8 inches × 2½ inches.

The floors to water-closets and urinals in retiring-room adjoining Lloyd's staircase to have oak joists and plates, like the water-closets on the basement story.

The rooms over the 11 shops in north façade to have framed floors, like those on the south side.

Frame a floor to rooms over banking-house in north-west angle, with 4 flitches 10 inches × 3 inches, bolted to iron beams, with inch bolts 3 feet 6 inches apart; bridgings 9 inches × 2½ inches; joists to front rooms 12 inches × 2½ inches; 4 tier of plates 4½ inches × 4½ inches; ceiling floor to banking-room under. 5 binders 7 inches × 3 inches; 10 iron shoes for ditto; ceiling joists 4 inches × 2 inches. Frame a floor to water-closet with 2 plates 4 inches × 2½ inches, and joists 9 inches × 2½ inches. All the joists and bridgings of the mezzanine floor to have stout double herringbone strutting not more than 6 feet apart.

One-Pair Floor.—Frame a floor to 3 rooms and passages on the west side of the Royal Exchange Assurance offices, with 6 flitches 10 inches × 3 inches, bolted to iron beams with inch bolts 3 feet 6 inches apart, and bridgings, 11 inches × 2½ inches; the joists to Secretary's room 12 inches × 2½ inches, plates 6 inches × 4½ inches on edge, and provide 28 cast-iron shoes to carry them. Lay plates 4 inches × 3 inches, and bridgings 6 inches × 2½ inches to the whole of the remainder of these offices, the plates not more than 5 feet apart. Frame ceiling floor to the Treasury under, with binders, 5 feet apart, 8 inches × 3 inches, and ceiling joists 4 inches × 2 inches, and provide 14 more iron shoes for binders.

The whole of the remainder of the one-pair floor to have bridgings 6 inches × 2½ inches, and plates 4 inches × 3 inches, 5 feet apart. Fix strong herringbone strutting to all the deep joists and bridgings of this floor not more than 6 feet apart.

Second Story.—Frame floors and flats level with floors, as follows:—

Single framed floors and flats to 9 rooms, 2 flats, and passages of the Royal Exchange Assurance rooms in south-west angle. Plates all round, partly on walls, and offsets, and 30 cast-iron shoes, 6 inches × 4½ inches to carry them. Joists and bridgings 12 inches × 2½ inches; the trimmers to be here 4 inches thick.

The upper rooms of the London Assurance offices to have similar framed floors, including 40 bearers and trimmers 12 inches × 4 inches.

The upper rooms connected with Lloyd's, including room in tower, to have similar framed floors, including 44 iron shoes or bearers, and similar trimmers.

The upper rooms and flats on the same level of the unappropriated offices in the north-west angle to have similar framed floors, with trimmers 12 inches × 4 inches; 20 cast-iron shoes.

Circular trimmers and plates to the circular angles of the building.

All joists and bridgings on this story to have strong double *herringbone strutting*, not more than 6 feet asunder in any part.

Provide 500 feet cube of fir timber, and all labour of framing in extra floors and extra timbers to the floors already described.

Tower.—Frame 3 upper floors with girders, joists, and plates, and lay them with 1½-inch jointed and rough-planed floors of yellow deal; trim them for openings, and form flaps with kerbs, linings, hinges, bolts, and other ironmongery; and provide and fix step ladders and stages, with guard rails and newels; all to be done according to directions to be given, and to the extent in value of 72*l.* at prime-cost rate of price; and also 3 doors, frames, fittings, and ironmongery, to obtain access to roofs, of the prime-cost value of 6*l.* each.

CARPENTER'S WORK TO PARTITIONS.

Basement Story.—Frame partitions to water-closets in basement of offices, south-west angle; head and sill, door-posts and door-heads, 4 inches × 4 inches; quarters 4 inches × 2½ inches, and 1¼-inch nogging pieces 2 feet apart.

Ground-story.—4-inch *framed partitions,* like the last described, to enclose and divide water-closets and urinals in retiring-room adjoining to Lloyd's staircase; the partitions in front will extend to ceiling; the dividing partitions will extend to underside of floors, to be formed to carry cisterns, with nogging pieces, as last described.

Mezzanine Story.—4½-inch framed and braced partitions, to divide the north-west wing; heads, sills, door-posts and heads, and two principal posts, 4½ inches × 4½ inches; braces 4½ inches × 3½ inches; quarters 4½ inches × 2½ inches; 4-inch framed partitions prepared for brick nogging, to divide and enclose urinals and water-closets in retiring-room connected with Lloyd's staircase, and also adjoining staircase of the Royal Exchange Assurance, as described before.

One-pair Story.—Framed and braced partitions to divide and form passages, rooms, and lobbies in the Royal Exchange Assurance offices, and also in offices of the London Assurance, and in offices unappropriated in the north-west angle; the circular partitions to have circular heads, sills, and braces; heads, sills, door-posts, and door-heads, 6 inches × 4½ inches; braces, 6 inches × 4 inches; 1 middle principal post to each pair of braces 6 inches × 4½ inches; corner posts 6 inches × 6 inches; quarters 6 inches × 2½ inches. The partitions to enclose small dog-leg staircase to upper rooms, to be the same, but quarters, &c., 4½ inches instead of 6 inches thick. *Provide,* in addition, 60 feet cube fir, and 3 cwt. of bolts and straps, and all labour for trussing the partitions on the Royal Exchange Assurance offices; and also 90 feet cube fir, 4 cwt. of iron, and labour for trussing the partitions of the London Assurance offices; and also 30 feet cube of fir, and 1 cwt. of wrought-iron straps and bolts, and all labour for trussing the partitions of the unappropriated offices at the north-west angle.

Frame partitions as will be directed for Lloyd's rooms, using therein 500 feet cube of fir timber.

Fix 2 tier of *strutting* to all the partitions except those of Lloyd's on this story. Fix nogging pieces, as before described, to the partitions each side of water-closet under south secondary staircase in the offices of the Royal Exchange Assurance, and fix similar nogging pieces to the partition round small staircase in the Unappropriated Offices north-west angle.

Second Story.—Frame and fix 5-inch partitions braced to divide the rooms and passages (excepting Lloyd's) of this story, and including also the kerbs next flats. Heads, sills, door-posts, heads, principal posts, and braces 5 inches × 4 inches; corner posts 5 inches × 5 inches; quarters 5 inches × 2½ inches. The partition round water-closet and small staircase in the north part of the Royal Exchange Assurance rooms to be the same but only 4 inches in thickness, and both are to be prepared for brick nogging, as described to other partitions.

Provide, frame, and fix 100 cubic feet of oak timber in trussing the 5 and 6-inch partitions, as the Architect may order, beyond the framing and trussing in fir, already described to be done.

CARPENTRY IN LINTELS, WOOD BRICKS, WINDOW-BOND, &c., CONNECTED WITH DOORS AND WINDOWS.

Doors, Second Story.—Oak lintels 4 inches thick, the width required, and to bear 6 inches each end; 8 wood bricks of oak to door jambs of each doorway in walls, the length needful, and 4 inches × $2\frac{3}{4}$ inches, and not more than 2 feet 6 inches apart.

Doors, First Story.—Oak wood bricks, as before; oak lintels 14 inches × 7 inches, and 14 inches × 8 inches, to large doorways, and 14 inches × 5 inches to one smaller doorway of Lloyd's; oak lintel 27 inches × 4 inches, to two doorways, and 6 inches × 4 inches to two others in Royal Exchange Assurance offices; one oak lintel 14 inches × 6 inches, to London Assurance; and one 36 inches × 5 inches, one 18 inches × 5 inches, to doorways in unappropriated offices.

Doors, Ground-story.—Generally oak wood bricks, as described before, to all doorways in walls; those doorways which have wood frames to have extra oak bricks framed into the door frames; oak lintels, 9 inches × 8 inches, to one, 18 inches × 6 inches to one, 18 inches × 4 inches to three, and also four others.

All other doors throughout, except those which have arched heads, to have oak lintels the width of the walls, and of thicknesses varying according to the width of opening, and in proportion to those already described; and also to have similar oak wood bricks.

The wood bricks, in reveals, for shop fronts, to be of fir, fixed as the others, and the same distance apart. No lintels will be required for windows which will have arched heads; but oak wood bricks, 4 inches × $2\frac{3}{4}$ inches, the length needful, and 2 feet 6 inches apart, to be fixed in reveals; and a tier of oak bond, the same scantling, to be fixed in all window backs, 18 inches longer than the width of the openings.

The Contractor to *provide* and fix 100 cubic feet of fir in such templates more than shown or described, as the Architect may deem needful and order to be applied.

The Contractor to *provide* and fix in the building 2000 cubic feet of fir bond, in such places and of such scantlings as the Architect may direct; all joints of which are to be dovetailed, lapped, and spiked with large spikes, or pinned with oak.

SOUND-BOARDING AND SUNDRIES IN CARPENTRY.

Ground-story.—Frame *loft floors* to carry cisterns, &c., over water-closets and urinals in retiring-room, adjoining Lloyd's staircase, with joists and plates, 4 inches by 2½ inches; the plates at ends only, and to be carried by 8 iron shoes, 14 lbs. each.

Mezzanine Story.—Lay ¾-inch deal sound boarding and double fillets to the floors of the Royal Exchange Assurance offices, and also to the rooms and passages in north-west angle over the Banking-house offices.

One-pair Story.—Lay ¾-inch deal sound boarding and double fillets to all the floors of the Royal Exchange Assurance offices, which have not arches under them.

Second Story.—Lay similar sound boarding and fillets to all those parts of the flooring of this story which are over the Committee and the Actuary's room, and the Governor's two rooms in the one-pair story of the Royal Exchange Assurance offices.

Generally, the carpenter to fix all bolts, straps, and other wrought iron connected with timber work, and also all the cast-iron corbels to tie-beams, and socket heads to trusses. Generally, the carpenter is to attend upon slater and plumber, and he is to cut away and trim for all trades, and reinstate after. He is to examine the carcasing from time to time, and wedge up and secure all timbers, screw up all bolts, drive up all wedges, and prepare the whole for the finishings.

BRACKETING, CASINGS AND SUNDRIES.

4½-inch circular framed bracketing to south end of Court room of the Royal Exchange Assurance offices, to the east end of Shipping office, and to flat arched soffits each side of chimney, in the same office. Fix similar bracketing to form piers, arches, and spandrils to 4 arches in passages. Fix similar bracketing to east side of Board-room of the unappropriated offices, and also to the lobbies and other parts shown in the plan of the same offices. Fix similar bracketing to form the arched soffits in the London Assurance offices. Provide and fix also all other bracketing needful for the plastering, and which will be described and set forth in the specification of that trade.

Provide and fix proper strong bracketing for all the ceilings and sides of Lloyd's rooms, including all domes, groins, pendentives, and other architectural decorative parts, to the extent in value of 500*l.*

Provide, frame, and fix, with all extra labour needful, 1000 cubic feet of fir, in braces and cores, for the bracketing throughout.

Execute, beyond what is shown and described, extra bracketing, to be ordered by the Architect, to the extent of 150*l.* in value.

Find all proper rods and moulds for setting out the bracketing.

Find, in addition to what is described in the specification of Smith's work, 25 cwt. of wrought-iron straps and bolts, generally small, to secure bracketing; and he is to fix them.

Find all *centring*, *turning-pieces*, and *moulds* for *niche heads*, and all extra carpentry needful for the proper and perfect execution of the masonry and brickwork; also all horsing to cornices and landings, and other parts needful. No part to be struck until allowed by the Architect; and the whole to be fixed with proper stages, struts, uprights, &c., needful.

Provide proper and ample *casings* for the several caps and bases to the columns and pilasters, and for the arrisses, strings, cornices, and other projections, wherever it may be deemed necessary, throughout, for all masonry requiring such casing, as stated in the six bills of that trade.

Provide centres for sundry relieving arches in masonry, to the extent of 50*l.* in value.

Provide all moulds and trammels for large inverts, and all customary rods for setting out the works.

Provide for the cost of *Kyanising*, and extra carting 200 loads of timber.

N.B.—All prices and amounts given in this specification of Carpenter's work to be considered prime-cost prices; and all the works provided, for which quantities or values are given, are to be examined, measured, valued, and allowed for, either way, according to the provisions of the contract.

JOINER.

MATERIAL AND WORK.

All flooring-boards and battens, all outside linings to sash-frames, and all deals and battens used in the basement and ground-story doors and fittings, to be yellow stuff, and to be listed clear of sap. All work connected with skylights, all deal skylights and sashes, and all doors and fittings opening on to flats in upper stories, to be also yellow deal, and to be listed similarly. All glued joints, in all work, inside and out, in deal, batten stuff, wainscot, or oak, to be feather-tongued. All grounds, and all other linings or works which are connected with plastering, to be extra grooved. To fix to all doorways 6 stout blockings for locks and hinges beyond the customary backings, which blockings are to be wrought fair, and are to be dovetailed to the grounds. All rebates in jamb linings, and all edges of doors to be slightly splayed, to allow them to shut close, and yet to open easily.

SASHES AND FRAMES.

All pulley styles to be wainscot, and 1¼ inch thick; all beads finished 1½ inch wide; all outside linings 1¼ inch thick; all inside linings 1 inch thick; all deal-cased frames to have double-sunk oak sills; all sashes double hung, with patent plaited flax lines and iron weights; and brass axle pulleys, lead weights, and catgut lines, to part which will be so described. Wainscot beads, fixed with brass screws and sockets.

The wainscot-cased frames to be deal, but with wainscot edges, pulley styles, heads, and beads; all to have catgut lines and lead weights. Generally, allow for the proper casing and preserving of all works belonging to water-closets, sinks, cisterns and urinals, and deliver them up to occupiers in a clean and perfect condition. Generally, all works in wainscot to be rebated and tongued together, and fixed with screws; and all screw-heads to be concealed by wainscot wafers. Generally, execute all joiner's work, and provide and fix all ironmongery and brass work shown in the drawings and herein described, and necessary to complete all other works, and to render perfect the intended designs.

FLOORING.

Basement Story.—To lay all parts of the basement story, not paved, with 1¼-inch yellow deal straight-joint floor, heading joints splayed, and make fair joints to paving. All floors of water-closets to be 6 inches above adjoining paving or floors; and fix to outer edges of the same 1¼-inch rounded nosing 2½ inches wide, and inch oak riser scribed to paving, 5 inches wide.

Ground-story.—To lay every part of the ground-story, not paved, with 1½-inch yellow battens, laid straight-joint, edge-nailed, and heading joints ploughed and tongued. Lay 1¼-inch wrought batten floor to cistern-rooms over water-closets and urinals.

Mezzanine Story.—To lay every part of this story, not paved, with 1¼-inch yellow batten floor, laid straight-joint, edge-nailed, and splayed headings.

First Story.—To lay every part of this story, not paved, with 1½-inch yellow battens, laid straight-joint, edges nailed, and heading joints ploughed and tongued. The battens for this floor to be the best picked and selected battens.

Second Story.—To be laid with similar batten flooring to that described for the mezzanine floor.

N.B.—The flooring in tower is described in the carpentry. All floorings to be cleaned off, preserved, and delivered up clean at the finish of the works, being *replaned* in any cases that may require it.

DOORS, GLAZED DITTO AND FITTINGS.

Second Story, Lloyd's Rooms.—The four doorways in partitions to have 2-inch deal, 4-panel moulded both sides doors, 3 feet × 7 feet; 1½-inch single rebated jambs, rounded one edge, staff-beaded the other, with 1¼-inch ground, and moulding 3½ inches girt on one side, 4½-inch butt hinges, and 7-inch mortice-locks.

A. *Royal Exchange Assurance Rooms.*—To fix to doorway to large flat in angle 2-inch 2-panel, moulded and bead flush sash door, 7 feet × 3 feet; proper door-case 7 inches × 3½ inches, with oak sill the same size; 4-inch butt hinges, mortice dead lock, narrow grounds, and single architrave 4 inches girt. Fix outside fittings, to keep out wet, of the prime cost value of 12*s.* To fix to doorway from kitchen to flat similar frame, but of extra height to allow fan sash 3 feet high, and transom to match; and fix outside similar fittings. The doors, 7 feet × 4 feet 3½ inches, to be 2-inch, 1-panel, bead flush and square folding *sash doors*, diminished styles, 4-inch butt-hinges, two 10-inch bolts, and 7-inch rim lock; narrow grounds, and architrave inside. To fix to the three doorways of landing and luncheon-room 2-inch 4-panel moulded both sides doors, 3 feet × 6 feet 8 inches; 1¼-inch double rebated jamb linings, 1¼-inch grounds, 4½ inches wide, and moulding 4 inches girt round both sides, 4-inch butt hinges, and
B. mortice lock. Fix to 10 other doorways 2-inch, 4-panel sq. doors 3 feet × 6 feet 8 inches; 1¼-inch jambs, and grounds and mouldings both sides, like the last described; 5 sets of the jambs to be 1½ inch, and to be square framed in 3 panels.

London Assurance Office.—Fix to the 9 doorways 2-inch 4-panel moulded two sides doors, 3 feet × 6 feet 8 inches; 1¼-inch double rebated jamb linings, one set to be framed and moulded, and to be 1½ inch; 1¼-inch framed grounds, 4½ inches wide, and single architrave round, 4 inches girt both sides, 4-inch butt hinges, and 7-inch mortice locks.

Unappropriated Offices.—To fix to doorway to flat similar door and fittings, as described before. (*See* A, above.) To fix to the other 2 doorways doors and fittings as described before. (*See* B, above.)

One-pair Story: Lloyd's Rooms.—To fix in Reading-room and

Secretary's room 2 *wainscot doors*, and 1 blank door of wainscot to match, 3 feet 4 inches × 8 feet, to be 2½-inch double-margined doors, moulded both faces; 4 sets of 1¼-inch deal grounds, 7 inches wide, and wainscot architraves 12 inches girt; 1¼-inch wainscot rebated linings, 7 inches wide to 2, and narrow ditto, to match, to the blank door; each door hung with 1½ pair 5-inch brass butts, and fix mortice locks 1*l*. 1*s*. in value, prime cost, exclusive of fixing. To fix to 4 other doorways in Clerks' room and bar, 2¼-inch deal, 4-panel, moulded both sides doors, one to be a sash-door, 1½-inch deal rebated jamb linings, 1¼-inch grounds, and moulding 3½ inches girt on 6 faces, 4½-inch butt hinges, and 7-inch mortice locks with horn furniture. Fix to the large doorways leading into the two great rooms, 3-inch *wainscot* 10-panel *folding-doors*, moulded both sides, with raised panels in two heights, hung with 5-inch brass butts, 3 to each fold, with concealed joints, and burnished knuckles and flaps; and fix to each pair of doors lock and furniture to cost 3*l*. exclusive of fixing and profit; and two 18-inch and two 54-inch brass flush bolts 1½ inch wide; the *linings* to be 1½-inch *wainscot*, moulded to match, in 14 panels and rebated; and fix on both faces of each, on proper deal grounds, 1¼-inch wainscot keyed ground with mitred angles and returns, tongued to deal grounds, glued and blocked; and fix on these wainscot grounds moulded architraves, 16 inches girt, with extra mitred angles and wainscot cornices, 33 inches girt, with mitred returns and deal cover boards and bearers. The friezes formed of the wainscot grounds to have cut ends of the prime-cost value of 12*s*. each. Fix to large doorway into Captains' room 3-inch folding-doors to match the last described, with plain 1½-inch rebated and keyed linings, and 1¼-inch deal grounds 10 inches wide on both faces, and wainscot architrave 16 inches girt; hinges as the last, and fix a lock of prime-cost value of 50*s*., exclusive of fixing. Fix to the 2 similar doorways in the Commercial room 2½-inch wainscot, 4-panelled, double margin, folding-doors, moulded on both faces, 1½-inch wainscot, rebated and staff-beaded, jamb linings; 1¼-inch deal grounds to one face of each doorway, and wainscot architraves 10 inches girt; also small wainscot frieze 8 inches wide, and moulded caps 10 inches girt, with proper deal grounds; the doors hung with 4½-inch brass butts, and fix to each a mortice lock with horn furniture.

Fix across the great room, and to form lobbies adjoining, a screen and partitions, with doors, as is shown in Drawings Nos. 18 and 19, and containing the following work, all to be executed with fine-grained wainscot.

Ft.	In.		
78	0	sup.	1¼-inch glued and mitred pilasters.
42	0	do.	2-inch glued-up diminished pillars, 10 inches diameter.
108	0	do.	2½-inch astragal and hollow sashes.
505	0	do.	2½-inch moulded and raised panels, two sides partition, 2 panels high.
60	0	do.	2½-inch 4-panel doors to match.
50	0	do.	2½-inch 2-panel sash doors to match, with semi-heads, folding, and in two heights.
402	0	do.	Mouldings.
30	0	do.	do. circular.
104	0	do.	do. in short lengths, straight.
310	0	run	Rebate.
140	0	do.	Cross rebate in short lengths.
184	0	do.	Labour to rebate and angle bead.
118	0	do.	Groove.
218	0	do.	Tongued joint.
244	0	do.	Mitred angle, glued and blocked.
130	0	do.	Small mitred fillet for plate glass.
96	0	do.	Mouldings 1½ foot girt.
76	0	do.	do. 2½ do.
82	0	do.	do. 3½ do.

No. 104 mitred angles to moulding, averaging 9 inches girt.

	£	s.	d.
Allow for carving and other works, prime cost . .	100	0	0
Allow for ironmongery to ditto, do. . .	12	0	0

C. *Royal Exchange Assurance.* — To fix to 4 doorways of Court-room and Committee-room 2½-inch *wainscot*, 4-panel, double margin *doors*, 3 feet 6 inches × 8 feet, moulded, with raised panels both sides, to be hung each with 1½ pair 5-inch brass butts, and fix mortice locks of the prime-cost value of 30*s.* each; 1¼-inch wainscot, double rebated jamb linings, 1¼-inch deal grounds, 6 inches wide, and wainscot architraves 12 inches girt, and allow 15*l.* for friezes and caps to 5 door faces. To fix in Committee-room 1¼-inch blank *wainscot door* to match, with similar deal grounds and wainscot architrave.

E. To fix to 2 small doorways in Governor's private room (2 feet 6 inches by 7 feet), 1½-inch *wainscot*, moulded and bead flush 4-panel *doors*, 1½-inch deal, rebated jamb linings and mouldings round, 4½ inches girt, on narrow grounds to 3 faces; doors to be hung with 4-inch brass butts, and fix to one 7-inch mortice lock and horn furniture; and to the other, 6-inch dead lock, with mortice furniture to match.

D. To fix to the 15 other doorways 2-inch *wainscot doors* (3 feet 3 inches × 7 feet 6 inches), 4-panel, moulded and bead flush, hung with 4½-inch brass butts to 1½-inch deal double rebated jamb linings, and fix on both faces of each 1¼-inch deal grounds, 5 inches wide, and moulded architraves, 10 inches girt (excepting one door to small staircase, which will require grounds and moulding on one face only); 7-inch mortice locks with horn furniture.

To fix round door to strong room, which will be iron, jamb linings, grounds, and architraves to match. Two sets of the jamb linings must be extra framed in 3 panels, finished bead flush.

London Assurance Offices.—Fix to the 5 doorways in Court-room, Committee-room, and Governor's room, *wainscot doors*, fittings, and ironmongery, as before described, and included in bracket C, and including 15*l.* for extra works to 5 door faces.

To fix to 7 other doorways, doors and fittings, including ironmongery, like those before described and included in bracket D.

To fix doors and fittings on landing, 14 feet 4 inches wide, and 14 feet 6 inches high, as follows:—The opening to have elliptical arched head, 5 feet high, included in the 14 feet 6 inches. 3-inch *wainscot grounds*, prepared for folding-doors, 10 feet × 5 feet, and 2 pieces of sash framing, 10 feet × 4 feet 2 inches, to match. Wainscot moulding 9 inches girt on each face; the doors to be folding, 2¼-inch wainscot, 1-panel, bead flush, 2 sides sash doors with diminished styles, hung with brass swing hinges, and fix to them 4 handsome bracket handles; to be *glazed* with 4 sheets of *plate glass*, 37 inches × 24 inches, secured with wainscot fillets, mitred and screwed. The sash framing each side to be 2¼-inch wainscot to match, glazed with 8 sheets of plate glass, 37 inches × 23 inches. Fix in head *wainscot frame*, 3 inches × 3½ inches, grooved and rebated, but no sill, and 3 pieces of 2½-inch wainscot sash framing to match, rebated and beaded at the joints, and glazed with 7 sheets of patent polished sheet glass; and allow the sum of 10*l.* for extra fittings to these doors and partition. Fix in addition, on inner face, 1¼-inch wainscot stop, staff-beaded and tongued, to be carried round elliptic head. To fix to the other doorways on landing, 5 feet 4 inches × 13 feet 2 inches, doors, 5 feet × 10 feet, hinges, handles, and glass, like the last described; and 2½-inch wainscot grounds and wainscot moulding, 9 inches girt on each face. Fix over 2¼-inch *wainscot sash*, with circular head, and glazed with 5 sheets of polished sheet glass. Wainscot frame 5 inches × 4 inches, with semi-head, 1¼-inch wainscot, plain-tongued and staff-beaded linings on both sides.

F. The 3 large doorways in Fire-office and Secretary's room to have 2½-inch wainscot, 1-panel, bead flush, 2 sides, sash, folding doors, diminished styles, hung with swing hinges, and fix 4 bracket handles to each pair; *glazed* with 4 sheets plate glass, 33 inches × 23 inches to each pair of doors; wainscot frame 5 inches × 4 inches, and 1¼-inch wainscot, tongued, and staff-beaded linings on both sides, 2½ inches wide, to 2 doorways, and 6½ inches wide to the others.

Unappropriated Offices.—The entrance doorway on landing, 13 feet 2 inches × 5 feet 4 inches, to have doors, glass fittings, and ironmongery as the last described within bracket F, with semi-head. The 3 doorways in Board-room and Committee-room to have *wainscot doors*, *fittings*, and ironmongery, as described before and included in bracket C, and allow 12*l.* for extra fittings to the same; one set of the jambs will be extra moulded in 4 panels to match; the soffit having 2 panels, and being double margined. Fit up in this Board-room 1 wainscot blank door, and fittings to match.

The 5 other room doorways to have wainscot doors and deal fittings, and ironmongery, as described before and included in bracket D. The small door to staircase to have wainscot door fittings and ironmongery, as described before and included in bracket E.

Ground-story, Lloyd's Rooms.—The entrance doorway from east area to have oak doorcase, 6 inches × 6 inches, extra moulded on the outer edge, and 3-inch wainscot 6-panel folding-doors, moulded and bead flush; the upper part fixed, the lower part hung with 3 pair of Redmund's 6-inch brass butts, with knuckles, and fix to them one 12-inch and one 30-inch brass flush bolt, 1½ inch wide; also a lock 50*s.* in value, and 2 brass knobs 21*s.* value each. The panels in upper part open for glass, and *glazed* with plate glass. To fix on doors wainscot mouldings 9 inches girt, to form mullion and transom, and sink the doors out for them. Fix in arch over, oak semi-frame, 6 inches × 4 inches, and 2½-inch wainscot sashes, in 3 pieces, glazed with sheet glass; the middle divisions rebated and beaded, and hung with 3-inch brass butt hinges, with brass knob turnbuckle fixed thereto. Fix in front of fan ornamental guard, which with pattern is to be of the prime-cost value of 25*l.*

G. *Royal Exchange Assurance.*—Fix to entrance doorway from western entrance to Exchange, 2½-inch wainscot 3-panel folding doors, 5 feet 6 inches × 9 feet 4 inches, moulded with carved panel on face and head, flush back, hung with 3 pair

G. 4½-inch brass butts to oak doorcase, 6 inches × 5 inches, with transom, and semi-head and wainscot moulding on transom, 9 inches girt; moulding 3¼ inches girt on frame. Fix to doors one 12-inch and one 36-inch strong barrel bolts, and a capital mortice rebated lock, with bronze furniture inside, and 2 large bronze knobs on the outside; brass door-chain and barrel, metal fanlight glazed. Fix round inside 1½-inch wainscot tongued linings, finished with staff-bead.

H. Fix in doorway from staircase to office, 10 feet × 5 feet, 2½-inch wainscot, 1 panel, moulded 2 sides, folding sash doors, with diminished styles, in 2 heights, the upper height fixed, the lower height hung with patent swing hinges; wainscot frame 5 inches × 3 inches, moulded on both edges, and fix on each side 1½-inch deal tongued and staff-beaded linings; the doors *glazed with plate glass*, 2 sheets 42 inches × 24 inches, and 2 sheets 24 inches × 24 inches. Fix to doors 4 bronzed bracket handles.

Fix in inner doorway in south entrance (8 feet 8 inches × 10 feet 4 inches), with arched head, 2½-inch wainscot partition and sash folding-doors, with semi-head; the doors, fittings, ironmongery, and glass, like the last described; the partition moulded to match; semi-metal fanlight 5 feet diameter, glazed, over doors. Fix to jambs on south side 1½-inch deal keyed staff-beaded and tongued linings: the head stucco. Fix on north side 1½-inch deal staff-beaded stop, tongued on; the sides of partition framed and moulded in 3 panels; the circular margin also to head framed and moulded in 3 panels to match.

Banking-house, North-west Angle.—Fix to south entrance doorway from portico, doors, frame, fanlight, fittings, and ironmongery, as described to doorway opposite, and included in bracket G.

Fix to 2 doorways into banking-house (averaging 4 feet 8 inches × 12 feet 10 inches), *wainscot doors and fittings complete*, as described before, and included in bracket H, including ironmongery; but the heads to be semi, and the wainscot frame continued round, but without linings, as stucco will be substituted to the semi-heads; the doors 7 feet 6 inches high; plate glass in doors 42 inches × 22 inches, and 4 squares in each; upper part of plate 29 inches × 22 inches, cut to shape.

Fix to the 5 smaller doorways 2¼-inch wainscot doors, 3 feet × 7 feet 6 inches, 4-panel, moulded both sides, hung each with 1½ pair of 4½-inch brass butt hinges to 3-inch wainscot rebated frames, 5 inches wide; and fix 1½-inch deal, tongued and staff-beaded linings on each face, to make up width of jambs; 1¼-inch deal grounds 6 inches wide, and deal moulded architraves, 10 inches girt on sides next rooms only; 7-inch mortice locks, with horn furniture.

Fix in front of staircase doors and partition (7 feet 9 inches × 14 feet 3 inches), including door 3 feet 3 inches × 7 feet 6 inches; sash over 3 feet 3 inches × 5 feet; sash framing each side 12 feet 9 inches × 1 foot 10½ inches. Wainscot frame 5 inches × 3 inches, with muntins, heads, and transom to door only; all to be rebated and staff-beaded; 2¼-inch wainscot 4-panel moulded and bead flush door, and the framing each side 1-panel moulded to match, with diminished styles; 3 sheets of plate glass 36 inches × 18 inches on each side; 2¼-inch plain fan sash over door, glazed with 2 sheets of plate glass 54 inches × 9 inches, and 1 sheet 54 inches × 17 inches. Wainscot moulded plinth both sides of partition and round frame mitred, 4 inches × ¾ inch. Wainscot keyed fascia 10 inches × 1¼ inch both sides, with rebate for plaster cornice, narrow wainscot soffit filled in between frames; 7-inch mortice lock, with bronzed furniture; the door to be framed, double margined, and to be hung with 1½ pair of 4-inch brass butts.

Fix to 4 doorways to shops in east entrance under tower, 2½-inch *wainscot sash doors*, 3 feet 4 inches × 8 feet 6 inches, glass, shutters, and ironmongery, as will be described for the shop doorways; oak doorcase, 5 feet × 5 feet, with moulding on edge; no linings inside. Fix to 4 doorways inside shops in east façade 2-inch deal 4-panel, bead flush 2 sides doors, 2 feet 9 inches × 7 feet; 2-inch deal 3-panel, bead flush jamb linings, rebated and finished with staff-bead on both edges; 4-inch butt hinges; 7-inch mortice lock.

Fix to doorway to Porters' room in ambulatory 2½-inch wainscot bead flush 2 sides sash door (3 feet 4 inches × 7 feet 6 inches), with diminished styles, glazed with sheet glass, and hung with 1½ pair of 4½-inch brass butts, to proper oak doorcase, 5 inches × 6 inches, with transom and semi-head. Above fix a metal fanlight, glazed, and fix round inside 1¼-inch tongued and staff-beaded stop, continued round head; 1¼-inch wainscot shutter to match; 2 brass nuts, 1 brass lifter, and 2 brass studs and plates; one 7-inch mortice lock, with bronze furniture.

Mezzanine Story, Royal Exchange Assurance.—Entrance doors to office, 5 feet × 8 feet 6 inches; 2½-inch 1-panel, bead flush and moulded *wainscot folding sash doors*, hung with Smith's patent swing hinges, rounded edges, not diminished styles. 1 square of plate glass, 21 inches × 54 inches in each fold, and wainscot fillets screwed; 4 bracket handles; wainscot frame 5 inches × 4 inches, hollowed for doors, and grooved for linings; 1¼-inch wainscot, keyed, tongued, and staff-beaded linings, 10 inches wide, as staircase; side grooved for stucco; 1¼-inch deal plain-tongued do. 6½ inches wide on inner side; 1¼-inch grounds, 6 inches wide, and deal moulded architrave, 6 inches girt; lintel 18 inches × 8 inches; 8 wood bricks.

Doors in Small Office.—One 2¼-inch 4-panel, moulded and bead flush *wainscot door*, 3 feet 2 inches × 7 feet; 4½-inch brass butts; 1¼-inch single rebated wainscot keyed jamb linings, staff-beaded on side next landing; 1¼-inch deal grounds, 5 inches wide, and moulded architrave, 6 inches girt; mortice lock and bronze furniture; lintel 18 inches × 4 inches; 8 wood bricks.

The other door, 2¼-inch 4-panel, wainscot moulded and bead flush door, 3 feet 2 inches × 7 feet; 4½-inch brass butts; 1½-inch plain deal, keyed jamb linings, rebated and rounded both edges; 1¼-inch grounds, 5 inches wide, and moulding 6 inches girt, both sides; lintel 18 inches × 4 inches; 8 wood bricks; mortice lock.

Banking-house, North-west Angle.—3 of the doors to be 3 feet × 6 feet 8 inches; 2-inch deal, 4 panel, moulded and square; 4-inch butt hinges; mortice locks; 1¼-inch jamb linings, rebated 1 edge, rounded 2 edges; 1¼-inch grounds, 4½ inches wide both sides; moulding 2¼ inches × 1¼ inch one side, and architrave 6 inches girt the other; partition 5 inches; jambs 7½ inches wide.

The other doors 3 feet × 6 feet 8 inches; 2-inch deal, 4-panel, moulded 2 sides; jambs as last, rebated 1 side, 1 foot 8½ inches wide, to be 1½ inch, and moulded in 3 panels; hinges, locks, and grounds as last, and moulding 6 inches girt both sides.

L. *Basement Story: Royal Exchange Assurance Department.*—
3 inner doors 3 feet × 7 feet, 2-inch 4-panel square;
1½-inch rebated linings, rounded 1 edge and keyed; 1 set
of grounds 4¼ inches × 1¼ inch; 2 sets of mouldings
M. 2½ inches × 1¼ inch; 4-inch butt hinges; 7-inch best
3-bolt rim lock. 4 doors to coal-vault, 3 feet 4 inches × 7
feet; 2¼-inch 4-panel square; proper oak frame 5 inches × 4¼
inches; moulding 1 side; 8-inch dead lock.

I. 2 sash doors and sashes over to external walls, 4 feet
6 inches × 10 feet; 2-inch 1-panel bead flush and square
folding ovolo sash doors 4 feet 6 inches × 7 feet net; diminished styles; glass 3 feet 6 inches from floor; proper oak
frame 4 inches × 4½ inches, and transom 4 inches × 3 inches;
2-inch ovolo plain fan sashes 4 feet 6 inches × 2 feet 9 inches;
4-inch butt hinges; one 8-inch and one 18-inch barrel bolt;
one 8-inch 2-bolt rim lock. Fix round inside plain-tongued
and splayed linings, and single architrave. Allow 1*l.* each
for adapting these 2 doors to office fronts over.

K. *London Assurance.*—1 door and sashes 8 feet 9 inches × 10 feet; door 3 feet 3 inches × 7 feet; 1½-inch bead flush panel over; 2 sashes and raming 2 feet 6 inches × 10 feet; the door 2-inch bead flush and square; 4-inch butt hinges; 8-inch two-bolt rim lock; 2-inch bead flush and square sash framing, with diminished styles; glass 3 feet 6 inches from floor; oak doorcase 4½ inches × 4 inches; 2 muntins; 1 transom over door, filled in with 1½-inch bead flush and square panels; 1¼-inch plain tongued linings splayed; single architrave 2½ inches × 1¼ inches.

Lloyd's Rooms.—One pair of folding doors 4 feet 6 inches × 8 feet; 2½-inch 1 panel bead flush and square folding sash doors, flat arched heads; glass 3 feet 6 inches from floor; diminished styles; 3 pair 4½-inch butt hinges; one 10-inch, one 24-inch barrel bolt; one 10-inch lock; oak doorcase, 5 inches × 5 inches; 1¼-inch beaded stop inside.

1 sash door and fan, 3 feet 3 inches × 10 feet, like that described in bracket I complete; no inside linings.

1 door 3 feet 6 inches × 7 feet 6 inches; 2½-inch 4-panel, bead flush and square; 1½ pair 4½-inch butt hinges; flat arched head; oak doorcase 5 inches × 5 inches; one 9-inch rim lock; 1¼-inch bead stop next staircase.

Banking-house, North-west Angle.—One door as I, complete. 2 doors as L, complete. 2 doors as M, complete.

Unappropriated Offices, North Side.—1 door &c., complete, as K.

DOORWAYS TO BASEMENTS OF SHOPS, SHUTTERS, &C.

13 doors complete, as I; those to circular corners to be framed straight. 17 doors complete, as K. 2 doors 4 feet 6 inches × 8 feet, flat arched heads; 2½-inch 1 panel, bead flush 2 sides sash door, diminished styles; glass 3 feet 6 inches from floor; 1½-inch keyed jamb linings, rebated both edges, rounded one edge; grounds 4¼ inches × 1¼ inch 1 side; moulding 2 sides; one 9-inch, one 24-inch bolt; 10-inch lock; 3 pair 4-inch butt hinges. 1 door 3 feet 3 inches × 7 feet; 2½-inch 2 panel, bead flush and square sash door; 1½ pair 4½-inch butt hinges; 8-inch 2-bolt rim lock; 1½-inch keyed linings; grounds 1 side; moulding 2 sides; and other works as the last.

Great Vault.—2 doors 3 feet 6 inches × 8 feet, with semi-head; 2½-inch wainscot, 2-panel, bead flush 2 sides sash doors; 1 pair 5-inch brass butts; mortice lock 25*s.* prime cost; oak doorcase 6 inches × 5 inches; 1¼-inch beaded and tongued stop on staircase side.

SHOP FRONTS, INCLUDING CIRCULAR WINDOWS ABOVE.

9 on the south side, like drawing, and as follows:—A skeleton frame for door and sashes, made out of the best Riga fir; muntins 9 inches × 5 inches, and part 9 inches × 4½ inches; styles, 9 inches × 4 inches; sill to circular window, 9 inches × 2½ inches; semi-head, 9 inches × 4 inches; semi-transom, 9 inches × 5 inches; all wrought, rebated, and beaded, and the sill sunk; rough framed transom, 9 inches × 4½ inches, and 4 uprights, 4½ inches × 2½ inches, framed in between it and sill; 1½-inch rough fillet, to carry ends of floor-boards. Moulded entablature, with 1¼-inch cover board, and with cut scrolls fixed on; the frieze 1¼ inch keyed, on backings, and rebated both edges for mouldings; the upper and lower mouldings to mitre round styles and muntins, which are to be rebated for that purpose. 6 cut trusses, and moulded blocked heads mitred to entablature. Moulded rail dividing shop sash, double rebated and double beaded for upper and lower sashes, and the mouldings on upper edge to be mitred round styles and muntins, which are to be grooved for it. Moulded transom for door, double rebated and double beaded in the same manner, 3½ inches high, 5 inches wide; 1½-inch bolection moulded window backs, rebated both edges; 1¼-inch moulded plinth and backings, scribed to foot paving, and mitred round styles and muntins, which are to be grooved for moulding. The ends of window backs to be tongued into styles and muntins. Moulded surbase and capping mitred round styles, and muntins to be sunk for it. Quartering to window backs framed to styles and muntins; heads and sills 3 inches × 3 inches; 3 uprights 3 inches × 2¼ inches; bearer 4 inches × 2 inches, spiked to inside of styles and muntins, to carry ends of flooring-boards. The door to be 2½-inch wainscot, 1-panel bolection moulded and bead flush inside sash door, with diminished styles, and 1¼-inch wainscot 2-panel, bead flush and square lifting shutter; the door hung with three 4-inch butt hinges, and to have a capital 2-bolt 7-inch mortice lock, with large bronze handles, and 2 10-inch bright barrel bolts. Fix to shutter iron heels screwed, brass lifter, 2 brass studs and plates, and 2 brass thumb-screws and plates. Fill in the 6 lower compartments with 2½-inch wainscot moulded sashes, and wainscot rounded fillet round each. The 2 lower compartments are to have five 1½-inch deal, 3-panel, bead flush and square lifting *shutters*; fix to each 2 iron heels screwed, 2 iron studs and plates, and a flush lifter; also neat chamfered wrought-iron shutter-bar, with mortice plates, bolts, nuts, and thumb-screws. Fix in

the semi-heads 2-inch metal lights, with 2½-inch rims; the glass to the whole to be the best flatted sheet glass. Fix inside 1¼-inch tongued and staff-beaded linings grooved, for plaster and wall linings; the linings saw cut and bent round semi-head, and an extra straight soffit to match shop ceiling, and 1¼-inch fascia, tongued and grooved, and also 1¼-inch tongued and beaded filling-in pieces over shop sashes. The torus skirting will continue round in the upper rooms, and fix above 1¼-inch plain keyed window back, rebated for torus skirting, and narrow tongued and beaded capping.

The other 3 will be similar, except parts varied as follows:—The 2, which contain entrance doorways to offices and staircase, to have folding sash doors and shutters the whole height and width of the middle division, to correspond with the others; but the locks to be rebated with double furniture, and one of the bolts to be 30 inches long, and provide a mortice plate, and letting in to stone to 1 bolt; the remaining part will be all sashes and no door. The window back in the ground-story of south-west offices will be 1¼-inch, 3 panel, bead flush; fix 1¼-inch flush beaded plinth, 7 inches wide, and moulded surbase, 3 inches girt, with narrow capping on it, tongued into sill, making together 2 feet in height. The 3 upper sashes in this part to be reduced 1 square in height, and the outside window back to be raised to make the whole height the same. The inside window back in the entrance to the south-west offices will be 1¼ inch, 1 panel, bead flush, and square; narrow tongued capping, and 1¼-inch flush beaded plinth, 7 inches high. The inside window back in the staircase front will be similar to the last.

Prepare and fix 14 shop and office fronts to the openings, north side, as is shown in the drawing of one of them; all parts to be similar to those in the south front, except as follows:—The doors will be in the middle, and will require separate door-posts, 7 inches × 2½ inches, and the moulding in front of transom will mitre round the same, and the window back, inside and out, will abut against them. Single shutters to side lights, and small shutters to sashes each side of doorway; these last shutters to be fastened like the shutters to door.

The front to small staircase, and the front to entrance to north-west offices, to have folding-doors to occupy the whole size of the single door; sashes, and fan over, with ironmongery, as the others. The inside window backs to be 1¼-inch bead flush, with flush beaded plinth and narrow tongued capping. The upper sashes in the front in private office to have the upper sashes reduced 1 square in height, and the inside and outside window backs raised to make the whole height the same; they will also be all sashes and no door, and the window back inside to be moulded with moulded capping and plinth, like the window opposite. The linings to staircase front will be wider, and the soffit will be cut to shape above and below. The linings and soffit to the second shop front, east of north entrance, will be wider above and below.

Prepare and fix 6 shop and office fronts to the openings east end, to be similar in every respect to those described for the side, but varying in dimensions, for which see drawings.

Prepare and fix 6 other shop fronts to the openings in the north-east and south-east circular corners, with all fittings and glass complete (according to Drawing No. 23), and constructed like the others, with such variation as the design renders needful.

Prepare and fix 7 shop fronts in east area, and 2 in passage, from east area to ambulatory, including all fittings and glass, as they are shown in drawings Nos. 22 and 23, constructed as the others, with such alteration of parts as the design renders needful.

This will make 47 in all; and the Contractor to execute additional works to these shop fronts, which the Architect may order, to the extent of 150*l.* in prime-cost value. The Contractor is also to execute extra and additional works to the doors, which the Architect may order, to the extent in value of 100*l.*; and also to provide extra ironmongery, and fix it, to the extent of 25*l.* in value.

JOINER'S WORK TO WATER-CLOSETS, URINALS, SINKS, CISTERNS, &c.

Lloyd's Rooms.—There is to be a slate cistern in the basement, of the prime-cost value of 10*l.*; 4 water-closets, 4 urinals, and 4 cisterns on the ground story; 4 water-closets, 4 urinals, and 4 cisterns on the mezzanine story; and 5 water-closets and 2 cisterns on the second story. Form enclosures, with 2-inch bead flush two sides partitions, on the second floor, with 1½-inch deal doors to match, and line ceilings and backs of closets with ⅝-inch matched linings out of battens. N.B. All linings to sides and ceilings of water-closets to be out of battens, and provide and fix in all cases 1¼-inch framed, beaded, and rebated grounds 3½ inches wide, all round the ceilings, and to tops and bottoms of linings to sides, to receive the linings which are to be rebated, and part nailed and part screwed to them. The divisions to be 8 feet high, and lay over them 1¼-inch batten floor and joists 10 inches × 2½ inches, and plates 4 inches × 2½ inches on four iron bearers or sockets; the framing in front 10 feet high, and part higher to the extent of 11 feet × 4 feet 6 inches in hopper of skylight. The doors to be 2 feet 3 inches × 6 feet 6 inches, hung with 3½-inch butt hinges, and fix above a transom and 1½-inch deal ovolo sashes hung on pivots with beads 1 foot 6 inches high; prepare the partition for these doors and sashes, and fix a similar door to obtain access to loft over closets; 1-inch strutting 4½ inches wide to loft floor; mortice latches with bolt and horn knob, and fix round door, rebated and beaded stops. Fit up each closet with deal fittings as follows:—1¼-inch fronts, clamped, and made to slide in 2-inch beaded grooved and framed uprights 2½ inches wide, screwed to linings; 1¼-inch tongued seat with rounded edge, the seats to be rebated on three sides, and hung with 2½-inch brass butts to a rebated and beaded frame 2½ inches square, screwed to linings, the front edge throated to receive tongued edge of riser; the flaps and frame 1¼-inch, with rounded nosing and hollow tongued on; the frame beaded and the flap clamped with mortices and mitred clamps. Fix round ¾-inch deal moulded skirting 6 inches wide, with tongued angles and mitred returns; this and all skirtings connected with water-closets to be screwed on with brass screws. The flap and frame screwed to seat with four 3-inch brass screws and brass sockets made for the same. Fix a paper box and candle shelf. 2 cisterns 66 inches × 36 inches, and 30 inches inside, of 2½-inch deal, tongued and dovetailed; inch-ledged covers with flaps hung with 18-inch garnets. Form flaps on the one-pair floor, as will be directed, to obtain access to pipes under, of the value of 3*l.* Fix on first floor, where directed, a sink 42 inches × 24 inches, and 8 inches deep inside; the outer enclosure to go down to floor to form a closet, and to be rebated, having 1½-inch square folding-doors hung with 2½-inch butt hinges, and fix to doors 6-inch bolt and brass-knob turnbuckle. Fit up the 8 water-closets in the two retiring rooms adjoining staircases, with 1½-inch 3-panel, bead flush two sides doors, 30 inches × 78 inches; 1½-inch ovolo sashes over, 30 inches × 36 inches, hung on pivots with beads, and fix lines, pulleys, and hooks to open and shut them, as well as all sashes hung on pivots; 1½-inch linings rebated and staff beaded both edges; 3½-inch butt hinges, and 5-inch mortice latches to each; line sides and ceilings of all, as before described. The 8 fittings, candle shelves, and paper boxes to be the same as last described, but to be Spanish mahogany. The 8 urinal closets in the same retiring rooms to be fitted up in the same manner as the 8 water-closets. Fit up in each urinal closet a Spanish mahogany front, 2 feet 9 inches high, with door hung with 2½-inch brass butts, and fix pulpit latch with horn knob; provide 20*s.* for fitting each urinal pan, in addition to the mahogany front provided; a mahogany candle shelf to each of these urinals. Provide and fix in these retiring rooms, water-closets, and urinal-closets, 8 cisterns, 4 feet × 3 feet, and 2 feet 6 inches deep inside, of 2½-inch deal, with ledged covers and flaps hung; fix over cistern on basement 1¼-inch deal ledged covers and flaps hung with garnet hinges. Form 2 doorways to obtain access to cistern rooms over water-closets and urinals in retiring room, ground floor, to be fitted with doors, fittings, and ironmongery, as described to water-closets, and fix skirting round them as before described. Fix on basement story 15 tier, on ground story 12 tier, on mezzanine story 9 tier, on first story 7 tier, and on second story 6 tier of pipe-casing to soil, service, waste, and rain pipes; to be formed of flush beaded, grooved, and rebated grounds, 3 inches × 1¼ inch, and 1-inch rebated and clamped panel, fixed with screws; cross rails every 3 feet 6 inches apart on the average; the flaps to be hung each with 1½ pair of 2½-inch brass butt hinges, and fix to each a brass knob turnbuckle: allow for 1 flap to each stack of pipe-casing in each floor. The doorways of the retiring rooms adjoining staircase on ground and mezzanine stories to have 2½-inch *wainscot*, 4-panel, moulded and bead flush *doors* 3 feet 4 inches × 7 feet 6 inches, hung with 4½-inch brass butts to wainscot frame 6 inches × 3½ inches, and fix round on the staircase side 1¼-inch wainscot tongued and staff-beaded linings 10 inches wide, and the same on room side, but to be deal.

The window to ground-story room to be taken the same as one of the shop fronts in east area, and the window of the upper room to be like the other windows in east area in the mezzanine story, and fix inside of it 1¼-inch deal tongued, splayed, and staff-beaded linings all round. Fix in basement adjoining cistern a deal fitting for sink, the same as described for the upper story. The doorway to water-closet room on the second-floor to have 2-inch deal bead flush two sides sash door, 3 feet × 6 feet 10 inches, hung with 4-inch butt hinges to 1½-inch deal rebated jamb linings, staff-beaded one edge, rounded the other; and fix on room side 1¼-inch grounds 4 inches wide, and single architrave 3½ inches girt. Fix round this room inch torus skirting 9 inches wide, and grounds for plaster. To perform all cutting and attendance upon plumber needful for the proper execution of his work. Fix narrow plaster grounds to all work connected with water-closets and urinals, so that any part of it may be removed without disturbing any adjoining work. The Contractor to *provide* and fix, in addition to what is herein shown and described to be done to Lloyd's rooms in connection with internal plumber's work, 350 feet superficial of inch-rebated tongued and staff-beaded linings and casings to pipes, in narrow widths, and 500 feet lineal of framed and grooved grounds 2½ inches wide; besides additional fittings, to be hereafter directed, of the prime-cost value of 100*l.*; and also, for extra pewter and glazed tile linings to urinal pans, the sum of 16*l.* for prime-cost charges.

Royal-Exchange Assurance.—A water-closet and cistern, sink, and dresser in second floor; 3 water-closets one pair; 2 water-closets in mezzanine story; 2 water-closets, 1 sink, and 1 dresser in the basement. Provide slate cistern in basement of the prime-cost value of 10*l.* with 1¼-inch ledged cover on bearers, and inch flap, hung with 30-inch garnet hinges. Fix over the double water-closet in basement a 2-inch deal one-side cistern, 4 feet × 2 feet 6 inches × 2 feet deep inside, on two wrought bearers, 4 inches × 2½ inches, inch-ledged cover and flap, hung with 12-inch garnet hinges. Fix on floor over double water-closet, one pair, a similar cistern and fittings, but to be 6 feet × 3 feet, and 3 feet deep inside. Fix over water-closet under stairs on one pair, a cistern of 2-inch deal, one side, 3 feet × 3 feet × 2 feet 6 inches, and 2 bearers and cover. To fix over double water-closet, one pair, and water-closet in second floor, a 2½-inch one-side deal cistern, 6 feet × 3 feet 6 inches, and 3 feet deep, with one ¾-inch bolt, and 2 straps, bolt covered with lead pipe, 1¼-inch ledged cover and flap, hung with 20-inch garnet hinges.

Fix in kitchen 2-inch deal sink 3 feet 6 inches × 2 feet, and 8 inches deep inside; the outside enclosure to go down to floor to form closet, rebated for 1½-inch square folding-doors, hung with 2½-inch butt hinges, and fix 6-inch bolt and brass knob turn-buckle.

Fix a sink and fittings as E in the basement.

Fix to the eight water-closets fittings as follows:—6 to be deal, and 2 to be Spanish mahogany; 1¼-inch fronts, clamped and made to slide in 2-inch beaded and grooved uprights, 2½ inches wide, screwed to linings; 1¼-inch tongued seats, with rounded edges; the seats to be rebated on three sides, and hung with 2½-inch brass butts, to a rebated and beaded deal frame, 2½ inches square, screwed to linings, the front edge throated to fit tongued edge or riser.

The flaps and frame 1¼ inch, with rounded nosings, and hollow tongued on; the frame beaded and the flap clamped with morticed and mitred clamps. Fix round ¾-inch moulded skirting, 6 inches wide, with tongued angles and mitred returned ends; the flap hung with 3-inch brass butts, and frame screwed to seat with four 3-inch brass screws, and brass sockets made for the same; the skirting screwed to lining with brass screws; cut holes for seat, rounded, and holes for handles, with beads mitred round. Fix in each a paper box and candle shelf, part deal and part mahogany.

Fix in basement 4 tier, in the ground story 4 tier, in the mezzanine story 3 tier, in the one-pair 2 tier of pipe casing, formed of rebated and double flush beaded and grooved grounds, 3 inches × 1¼ inch, and inch rebated and clamped panels, 14 inches wide on the average, fixed with screws; 3 cross rails to each stack in each story, and allow for hanging 1 panel in each story in every stack, with 1½ pair of 2½-inch brass butt hinges, and fix to it a brass knob turnbuckle. Provide also for 250 feet superficial of inch rebated, tongued, and staff-beaded pipe-casing, in narrow width, and 400 feet lineal of framed and grooved grounds, 2½ inches wide.

Provide for all cutting for pipes, including cutting through arches.

Line the ceiling of water-closet, 2-pair story, and sides round seats the whole height, and the remainder of sides 4 feet high, to top of ground, with ⅝-inch matched and beaded linings out of battens, the edges rebated, and fix 1¼-inch rebated and beaded grounds all round for the same, top and bottom 3½ inches wide, and the edges of the grounds adjoining plastering to be extra rebated and grooved. The door to be 1½-inch 2-panel bead flush and square, 2 feet 3 inches × 6 feet 6 inches, hung with 3-inch butt hinges to 1½-inch jamb linings, single rebated and staff-beaded 2 edges, and fix to door a bow spring latch, and a 4-inch brass bolt. Fix in window, deal cased frame, oak sunk sill, and 1½-inch ovolo sashes, double hung, and brass axle pulleys, patent lines, and sash fastenings. Fix round inside inch tongued, splayed, staff-beaded, and grooved linings, and 1¼-inch window board, rounded and tongued. Fix in kitchen a *dresser*, of the prime cost value of *5l.*, and chimney-shelf and brackets, and plate-rack, and sundry other fittings, of the value, collectively, of *3l.* prime cost. Fix, to ascend to water-closet one-pair, 1¼-inch moulded steps and risers, housed to 1½-inch keyed spandril, flush beaded, and grooved on the top edge, and staff-beaded on edges next passage. The floor over to extend over lobby and 2 closets only, and form 3 openings in the same, 2 feet × 1 foot, and fix round them 1¼-inch rebated, staff-beaded and grooved linings, fixed on splay, 4 inches all round, and the opening glazed with unground plate glass, level with floor. The ceiling of lobby and 2 closets finished as before described. Form the closets with 4-inch quartering, brick nogged on edge, and trimmed for 2 doors, 2 feet 6 inches × 6 feet 10 inches, and 2 openings at back of seats, 18 inches × 12 inches; the doors 1½-inch 3-panel, bead flush, and square, hung with 3½-inch brass butts to 1½-inch jamb linings rebated and staff-beaded 2 edges, with a 5-inch 2-bolt mortice latch to each. Fill in small openings with 8 ¾-inch louvres, 6 inches wide, housed both ends into 1½-inch similar linings. The backs and remaining sides of closets and lobby to be lined with ⅝-inch linings and grounds, as before described: the cistern will stand on floor over. Enclose water-closet under stairs with similar 4-inch partition door and fittings; the ceiling and sides lined. Provide for this closet a *ventilating shaft* 6 inches square inside, to pass through ceiling and stairs, and along ceiling of two pair, out through kerb. Provide also for fixing a 9-inch illuminator in one of the windows of staircase over this closet. Provide and fix similar partitions and doors, and provide similar linings to sides and ceiling of the 2 water-closets in mezzanine story; 2 feet 2 inches of the ceiling will be open, and the upper panels of the doors to be glazed with ground glass. Fix round lobby 1¼-inch flush, beaded, and grooved plinth, 9 inches high; stucco sides, and lath, plaster and flote ceiling. The door from staircase to this lobby to be a 2½-inch deal 4-panel moulded and bead flush door, 3 feet 2 inches × 7 feet, hung with 1½ pair 4-inch butts to 2-inch 3 panel bead, flush jamb linings, rebated and staff-beaded both edges, and fix to it a 7-inch 3-bolt mortice lock, with buffalo horn furniture. Fix similar partitions, doors, linings, bow latches, and bolts to sides, but not ceilings of water-closets in basement, and allow *5l.* for prime cost charge for providing a shaft for light and ventilation from Ambulatory; the opening for doorway to be 8 feet high, but the doors 6 feet only. Fix in doorway leading to lobby 1½-inch 4-panel bead flush and square door, 6 feet 6 inches × 3 feet, hung with 3¼-inch butts, and a 7-inch rim lock, to 1½-inch keyed jamb linings to sides only, on 8 wood bricks, rebated and rounded both edges. Provide in 1 room in basement *dresser and fittings*, similar to those provided for kitchen in second floor. Provide for executing sundry extra works connected with water-closets, &c., of these offices, as will be directed by the Architect, to the extent in prime cost value of *25l.*

[The London Assurance-office, Unappropriated-office, and Banking office north-west angle, had described convenient arrangements and fittings, similar to the preceding.]

Shops.—Fix in 36 basements of shops fittings as follows:—The partitions to be from floor to ceiling, 9 feet high, and of 2-inch square framing, prepared and rebated for a door and sash. The doors to be 2 feet 3 inches × 6 feet 6 inches; 1½-inch 3-panel square, hung with 3½-inch butt hinges, and a bow spring latch, and 6-inch. bolt to each. A sash to each partition, 2 feet × 1 foot

6 inches; 1½-inch ovolo glazed; beaded stop round door and sash. The brick sides in closets only to be lined 4 feet high, with linings and grounds as before described. Deal fitting paper box and candle shelf complete. A cistern 3 feet × 3 feet, and 2 feet 6 inches deep inside, adjoining to water-closet; 2-inch deal dovetailed 1 side, with inch ledged cover and flap, hung with 14-inch cross garnets. Oak bearers and uprights 4 inches × 4 inches, studded into stone.

Fix under cistern a sink 3 feet × 1 foot 9 inches, and 6 inches deep inside, fitted up as in the other kitchens.

Execute extra works connected with these water-closets to the extent of 25s. each.

The whole of the *mahogany work* connected with all the water-closets and fittings in each set of offices *to be French polished;* and it is to be covered, preserved, and delivered up, together with all other works, in clean and perfect condition.

SKIRTINGS, DADOES, WALL-LININGS, AND SUNDRIES.

Two-pair Floor: Royal Exchange Assurance.—Fix round kitchen and room adjoining dwarf linings as described round shops. Fix to every other part 1¼-inch torus plinth 9 inches wide, and narrow grooved grounds for plaster; beaded angle staves to all external angles. Fix round circular opening in passage floor, *i. e.* the circular part, 1¼-inch tongued, staff-beaded, and sunk apron, with moulded nosing and hollow; the whole to make 14 inches; 1¼-inch deal balusters and wainscot hand-rails 3 inches × 2¼ inches; 4 iron balusters: mitred returns to skirting where needful.

London Assurance.—The mastic flush beaded skirting of staircase to finish with stone landings, and fix to the remainder of long passage 1¼-inch flush beaded plinth, grooved for stucco 9 inches high. Fix to every other part not before taken 1¼-inch torus plinth, and grounds 9 inches high; beaded angle staves. To form 2 *openings in floor* under flat lights; fix round them 1¼-inch staff-beaded and sunk linings 10 inches wide, and 2½-inch moulded wainscot frame, rebated for 8 squares of rough plate glass, ground on upper surface, to be fixed flush with floor. Fix in small opening 1, and in larger opening 5 brass rebated and moulded bars to bear the glass; the glass to have ground edges, fitted in close rebates with strong cement. Fix to jambs of small arched opening in partition 1½-inch linings up to springing, staff beaded both edges, and take bracketing for arched soffit.

Lloyd's Room.—1¼-inch torus skirting 9 inches wide, and plaster grounds to all parts not otherwise described: and fix all angle staves wanted.

Unappropriated Offices.—1¼-inch torus plinths and beaded angle staves.

N.B.—The sides of water-closets, and other places connected with them in this and other floors will be lined in part, and partly skirted; and all such works are to be done as they are described in that part of the specification of Joiner's work which relates to the water-closets and rooms, places, and parts adjoining.

One-pair Floor: Royal Exchange Assurance.—Beaded angle staves to all external angles; 8 deal pilasters in passages 10 feet 6 inches from floor; skirting to mitre round; the pilasters to be glued, blocked, and mitred, with narrow returns fixed to skeleton grounds; moulded caps mitred 10 inches girt. Fix all round passage 1¼-inch flush beaded skirting 9 inches high, grooved for stucco, to match mastic plinth on stone landings. Fix round 3 waiting-rooms, Secretary's rooms, Actuary's, and Governor's 2 rooms, but not closet, and Porter's room, dado complete 3 feet high, *i. e.* inch plinth 6 inches high rebated, base moulding 4 inches girt, 1¼-inch keyed dado 2 feet 6 inches high, rebated both edges, 2 tiers of backings, moulded surbase 8 inches girt, grounds for
C. plaster. To fix round Life and Shipping Offices 1¼-inch bead flush dwarf wainscoting, narrow panels and frieze panels; 1¼-inch flush beaded and rebated plinth 6 inches high; 1¼-inch grooved, rebated, and flush beaded grounds 5½ inches wide, moulded surbase 6½ inches girt; the whole 4 feet 6 inches high, continued over chimneypieces.

Take in Court and Committee rooms dado as before described, but to be of wainscot; housings, tongued angles, some mitred, some staff-beaded; line closet in Governor's room with matched linings 9 feet high, and form ceiling with boarding and joists 4 inches + 2½ inches. Allow 5*l.* for fitting up closet over.

London Assurance.—Fit up with wainscot dado, like the last, 3 rooms, for the Court, Governors, and Committee. The passage and small room, deal flush beaded skirting. Committee room in circular corner, dado, but deal, as described to the Royal Exchange Assurance. 4 offices to have deal wainscoting as described and included in bracket C above. Angle beads, no pilasters, but bracket out for piers, and fix angle beads. Fix in Secretary's room a sash with semi-head of 2½-inch wainscot, to correspond with window in internal façade, glazed the same; 1 square to have metal casement, 1¼-inch wainscot, staff-beaded, tongued, and grooved linings round.

Lloyd's Rooms.—Fix round the Captains' room wainscot moulded plinth as follows:—1-inch keyed plinth 18 inches wide, base moulding 2½ inches girt, 1 inch upper plinth, tongued 10 inches wide, and upper moulding 5 inches girt, all with proper deal grounds and backings. Fix round the 2 great rooms, the Reading room, and the Secretary's room, wainscot dado, part in short lengths, with narrow returns to form pedestals to piers, as follows:—1-inch keyed plinth, base moulding 5 inches girt; 1-inch keyed dado 1 foot 7 inches wide, rebated both edges; moulded surbase 9 inches girt; 2 tier of deal grounds. All the plinths, including plinths of dados, to be tongued to floor in Lloyd's rooms; the angles to piers, &c., will be patent cement. To fix round Clerks' office in Tower and passages adjoining, deal bead flush dwarf wainscoting, as described for offices on this floor; beaded angle staves in these rooms.

Unappropriated Offices.—Prepare and fix to entrance 1¼-inch deal plain pilasters, with narrow returns and angles glued and blocked, with moulded and mitred plinths and caps, on 1½-inch skeleton grounds. To fix round Board room and Committee room wainscot dado complete, with deal grounds, as is described for the Court room of the Royal Exchange Assurance offices. To fix round all the other rooms deal dwarf wainscoting, framed bead flush, and all fittings complete, as is described for the Shipping and Life offices of the Royal Exchange Assurance offices. To fix to the passages 1¼-inch flush beaded plinth, as before described, to match the mastic plinths on staircases and landings. Fix all beaded angle staves.

Ground Floor: Royal Exchange Assurance.—Fix round great office and recess 1¼-inch bead flush wainscoting with frieze panels, the panels not more than 9 inches wide, 1-inch flush beaded plinth 7 inches wide, 1¼-inch beaded ground 4 inches wide, and moulded surbase 5 inches girt, the wainscoting rebated top and bottom; the plinth and ground rebated, and the ground grooved for plastering; the whole 4 feet 6 inches high; internal angles tongued, external angles rebated and staff beaded. The wainscoting to be continued under the 2 small windows, but not the 2 large windows, and to be continued over chimney-pieces; the capping to be housed to architrave of door, and returned and mitred to linings of 2 windows; 3 tiers of backings fixed to wall with holdfasts, beaded angle staves to external angles.

Thirty-eight shops, and Recesses in them.—Fix round every part matched and beaded linings, with flush beaded plinth, capping, and ground, the whole to be 4 feet high; the linings of 2 cut batten stuff, rebated both edges; the plinth 1¼-inch, 7 inches high, rebated and beaded; the grounds 2 inches × 1¼ inch, rebated, headed, and grooved; tongued angles to plinth, which is also to be tongued into linings round reveals of shop fronts; rebated and staff-beaded external angles to linings; 1 tier of backings as last to linings; linings to be taken all round staircases, and round all piers and recesses, and to be housed into shop fronts in 6 small shops in east area, and to continue in reveals of 2 outer doorways to small shops adjoining east entrance, housed into frames, continued across all flues, and made good to upright slabs 2 feet × 3 feet high, which will be fixed against walls; beaded angle staves to all external angles.

Banking-house.—Fix round bank only wainscoting complete, similar to that which has been described to office opposite. To fix round the 2 private offices 1¼-inch keyed dado; 2 sets of grounds; 1¼-inch moulded base 7 inches high, and surbase 6 inches girt, the whole finished 3 feet 3 inches high; not to be continued through windows, but to be return-mitred to the linings, and to be housed to architrave of doorways.

Mezzanine Floor: Royal Exchange Assurance.—Fix round Treasury, lobby of water-closets, and Accountant's room, wainscoting with plinth, surbase, grounds, and backings, as in office below, excepting that the whole is to be 3 feet 9 inches high, and the wainscoting 1 panel high only; to be housed to architraves of doors, with beaded angle staves to external angles; the wainscoting not to be continued across window backs.

Thirty-six Rooms, with Recesses over Shops.—Fix round every part including window linings, and in window backs, 1-inch torus plinth 9 inches wide, with backings and narrow grooved grounds for plaster; tongued angles to plinth; beaded angle staves to all external angles.

Banking House.—Fix round kitchen and scullery wall linings, plinth, grounds, and backings, as described to the 38 shops. To fix round sitting room 1¼-inch rebated plinth, 9 inches wide and backings, narrow grooved grounds, and base moulding 4 inches girt, not to be continued through window backs. To fix in passage and 3 chambers, torus plinth, grounds, &c., as described to the 36 rooms over shops; all plinths to have tongued angles, and to be housed to architraves round doors; beaded angle staffs to all external angles. Deal grooved grounds and proper deal backings to be taken in all cases to all moulded or beaded plinths, and all dados, wainscotings, dwarf linings, pilasters, and other work; all grounds and backings to be plugged; all mouldings, and all plinths, dados, wainscotings, and dwarf linings to be housed wherever they abut, to be scribed to floors, and all stonework or marble-work adjoining them; all internal angles to be tongued, and all external angles to be mitred and tongued, except in some cases in which the external angles will be rebated and staff beaded; all angles of pilasters and caps, and bases to pilasters to be mitred, glued, and blocked; all grounds to be framed at the angles, and all grounds in sight to be mitred and tongued; the plinths to be ramped where needful; all grounds, wainscotings, dados, linings, plinths, and pilasters are to be grooved where required for plastering, and rebated for mouldings.

Provide and execute extra joiner's work as follows, according to future directions to be given by the Architect:

To Lloyd's rooms to the extent in value of 250*l.* To the offices of the Royal Exchange Assurance to the extent in value of 150*l.* To the offices of the London Assurance to the extent of 100*l.* To the Banking-house offices to the extent of 25*l.* To the Unappropriated offices to the extent of 50*l.*

Fix in ceiling of large lobby and recess 7 frames for horizontal lights; 6 of them 5 inches × 4 inches, and one 6 inches × 6 inches, of fir, moulded, rebated, and grooved. Fix in frame metal ornamental sash glazed of the value of 12*l.* Fix in the other frames sheets of ground glass. The plans of all these lights are shown in Drawings 18 and 19.

Washing-room on Second Floor.—Fix round openings for skylights similar linings and mouldings to those described for the openings under skylights of the Royal Exchange Assurance. Fix similar linings and mouldings to 2 openings in ceiling floor in room beyond Tower.

One-pair Story.—Fix to the 39 *large windows of the external façades* in the one-pair story, 6 of which are circular on plan, frames and sashes as follows: strong deal cased double frames with transoms, and 2¼-inch astragal and hollow wainscot sashes; 2 upper sashes fixed, the 2 lower pair hung double, with catgut lines, brass axle pulleys, and lead weights; best patent sash fastenings, oak sunk sills, 9 inches wide, and 4-inch copper tongue to oak and stone sill; inside wainscot beads 1½-inch wide, fixed with brass screws and sockets; 1¼-inch wainscot pulley styles; 1¼-inch outside, and 1-inch side linings, with wainscot edges. Fix on muntin and transom wainscot moulding, 6 inches girt, and on sides and head of frame wainscot moulding 2½ inches, mitred. These mouldings fixed on with tongues.

Fix to the 24 *windows in the internal façades* of the one-pair story, frames and sashes as follows: strong deal cased frames, with wainscot beads and pulley styles; and oak sunk, and grooved sills; copper tongue to oak and stone sills; 2½-inch wainscot astragal and hollow sashes, glazed, 6 of them with polished sheet glass, and 14 with polished plate glass, double hung, catgut lines, large brass axle pulleys, lead weights, 1¼-inch outside linings, 1-inch inside ditto, 1½-inch pulley styles; inside bead 1¾ inch wide, fixed with brass screws with sockets, heads finished circular. The 4 smaller windows sheet glass.

INTERNAL FITTINGS TO WINDOWS, ONE PAIR.

Royal Exchange Assurance.—Fit up 5 windows in Court room and Committee room with 1½-inch wainscot splayed and tongued linings, 10 inches wide, with arched head, part semi, part flat, and the linings to have a moulded band, with 2 stopped ends, mitred ends worked in the same, 7 inches girt; 1¼-inch deal grounds and wainscot moulded architrave, as to doors; 1½-inch 1-panel moulded and raised panel window-back, with plain plinth and moulded capping tongued, 3 inches × 1¼ inch; mitred and blocked plinths to architraves, returned to side linings.

N.B.—Put similar plinths to the doors in these rooms.

The finishings inside to windows in two west waiting rooms will be explained in description of the great west window.

Fix to the 7 other windows 1¼-inch bead flush window backs, with ¾-inch flush beaded plinth 4 inches wide, and double-beaded tongued capping; 1¼-inch deal plain, tongued, splayed, and staff-beaded linings to sides and arched heads; 1¼-inch framed grounds 4½ inches wide, and architrave 10 inches girt.

The windows in strong room will be similar to the last, and of similar size, and finished in the same manner as window in the room below.

The great window in west waiting room will have cast-iron ornamental guard. Fix inside oak frame and sill 5 inches × 4 inches, with 2 muntins 5 inches × 4 inches, and 2½-inch wainscot moulded sashes glazed with sheet glass. The 2 middle sashes hung with 3 pair of 3-inch brass butts, and fix espagnolette bolt on meeting styles, tongue and groove to hanging styles; double rebate and bead to meeting rail, rebate and throat to bottom rail; brass moulded stop on sill to middle sashes only; copper tongue under to oak sill; 1¼-inch plain deal keyed window back, 1 foot 6 inches high; double-beaded capping. Fix all round 1¼-inch staff bead tongued on oak frame.

London Assurance Offices.—Fit up 4 windows, 3 having semi-heads, as Court room of the Royal Exchange Assurance offices.

Fit up staircase window with 1½-inch deal tongued, splayed, staff-beaded, and grooved linings all round. Fit up window in small room with similar linings, and 1¼-inch plain deal keyed back (cut bead), and double-reeded narrow capping.

Fit up 10 other windows as the 7 windows in the offices of the Royal Exchange Assurance.

Unappropriated Offices.—Fit up 6 windows as the 7 windows of the Royal Exchange Assurance offices. Fit up 1 window in lobby as small room in London Assurance offices. The inside fittings of 1 window are described with Joiner's work connected with water-closets.

Lloyd's Rooms.—Fit up the great window of staircase with a deal-cased frame, with wainscot edges and other wainscot parts, as before described, and 2½-inch wainscot sashes, double hung with catgut lines, lead weights, &c., complete, and glazed with polished sheet glass; 3 small brackets, each of 10*s.* value; copper tongue to sill. Fit up inside with 1¼-inch wainscot plain keyed pilasters, and narrow returns, with moulded and mitred caps and bases, the whole mitred, glued, and blocked. Fix proper deal grounds for all the wainscot fittings; 1¼-inch sunk wainscot frieze, with mitred ends; wainscot moulded impost, 27 inches girt, with 4 mitres and returns. Wainscot archivolt, 16 inches girt on circular deal grounds 12 inches wide; narrow wainscot soffit 3 inches wide to archivolt, to be mitred, glued, and blocked to it; 1¼-inch wainscot plain keyed window backs, with 1¼-inch wainscot rebated plinth, 8 inches wide, base moulding 4 inches girt, surbase moulding 7 inches girt, and ½-inch wainscot tongued capping, 3¼ inches wide. All to be housed into pilasters, and plinths tongued and mitred to plinths of pilasters.

Fix to 4 windows on the north side of the Commercial room, inch deal 1 side glued and blocked boarding for painting to cover the blank windows. To fix to the 5 windows opposite 1¼-inch wainscot splayed and tongued linings continued round circular heads, and also all round wainscot beaded and double rebated ground 3 inches × 1½ inch. Fit up window in closet west end of this room, with 1¼-inch deal plain keyed window back, with double-beaded and tongued capping and linings, as to the other windows, but to be deal and not wainscot.

Fit up the 3 windows in lobby with 1¼-inch wainscot rebated plinth 9 inches high, and moulding 6 inches girt; 1¼-inch wainscot plain framed grounds, the heads cut circular; 1¼-inch wainscot tongued and keyed linings all round, and double-beaded and rebated wainscot ground 3 inches × 1½ inches; the remaining dressings will be plaster.

Fit up the 5 windows in the Captains' room with wainscot fittings similar to those described for the Royal Exchange Assurance.

Fit up the window east side of Secretary's room with 1½-inch wainscot moulded and raised panel window back, with moulded capping, 3 inches × 1¼ inch of wainscot, tongued on, and 1½-inch wainscot tongued, keyed, and splayed linings, with moulding 7 inches girt worked thereon, with stopped end, and to be continued round circular head; also wainscot moulded architrave all round, 12 inches girt. Proper deal grounds and backings for the whole.

Fix to the small window opposite deal cased frame with wainscot edges and fittings, and 2¼-inch wainscot sashes, with catgut lines and lead weights, double hung, brass axle pulleys, and the sashes to be glazed with polished sheet glass. Copper tongue to sill, and patent sash fastening; the sash fastenings to this and all other windows to be of the value of 3*s*. each, exclusive of profit and fixing.

Fix inside to this window window back, capping, linings, with moulding worked thereon and stopped, and architrave; and all other fittings, in deal and wainscot, to be like those described for the opposite window.

Fix inside the east window in Tower 1¼-inch deal bead flush window back, with double-beaded and tongued capping and semi-linings, each side 4 feet high; the remainder of sides and soffit will be plastered; with proper bracketing fixed for it. Moulded architraves 12 inches, with plinths and proper grounds; the circular head plaster. Fix to the east window in Clerks' room 1¼-inch keyed, tongued, and splayed linings of deal, continued round semi-head with grounds, architrave also round semi-head 10 inches girt. Plinths to architrave. Fit up the window in bar with deal fittings, similar to those described for the offices of the Royal Exchange Assurance.

Fix in window opening on the staircase to second floor, frame, sashes, glass, and ironmongery, the same as described for west window of the Secretary's room; and fix inside 1¼-inch deal tongued, staff-beaded, and splayed linings all round, including bottom and arched head.

Fix to the 2 windows in Reading room ledged covers for paint as described for the other blank windows; the heads cut.

Unappropriated Offices.—2 windows, 1 in Board room, a semi-10 feet diameter net, and the other 4 feet 6 inches × 6 feet net, which are shown on Plan No. 5 of the second story. Fix in both of them oak proper frames and sills, 6 inches × 4 inches, with copper tongues, and 2½-inch wainscot sashes, glazed with polished sheet glass; the frames grooved for plaster.

WINDOWS AND SASHES, SECOND STORY.

Royal Exchange Assurance: Under Skylight.—Fix in ceiling round 5 openings 1¼-inch staff-beaded linings 9 inches wide, and moulding 5 inches girt; and fix deal fittings inside, under great sloping skylight over area, cistern room, water-closet, and small staircase, of the value of *5l.* Fix to the 3 windows deal cased frames, 2-inch ovolo sashes, double hung, patent lines, brass axle pulleys, iron weights, patent brass sash fastenings; 2 windows to have sills 8 inches wide, throated, and fix outside on each of these 2 windows fittings 12*s.* in value. Fix inside 1½-inch tongued and rounded window boards, narrow grounds and single architraves, and to 1 of them inch plain tongued linings.

London Assurance.—Fix to 3 windows frames, sashes, and fittings as the last; 1 window a triple frame, muntins 1½ inches wide. To fix to openings in ceiling of passage 2-inch ovolo flat sashes, hung with 3½-inch wrought butts (3 to 1 sash) to 1½-inch rebated and staff-beaded linings 7 inches wide, and to 1 fix two 6-inch brass sockets and barrel bolts, and to the other 3 similar bolts. Fix to the other openings in ceiling floor under skylight, linings and moulding as described before.

Unappropriated Offices.—2 windows; to be the same as windows in curbs of Royal Exchange Assurance.

Lloyd's Rooms. See Drawings 18 and 19. Fix to circular window in Tower *cast-iron sash,* and allow 21*s.* for casement. Fix to the other 2 windows cased frames, and 2¼-inch wainscot sashes, sash fastening, fix inside 1¼-inch plain tongued staff-beaded linings all round.

Commercial Room.—5 *horizontal lights* to be formed in ceiling floor. Fix fir frame 6 inches × 6 inches, moulded, rebated, and grooved; 2½-inch deal fancy moulded flat sashes, glazed with ground sheet glass.

WINDOWS, GROUND STORY, AND MEZZANINE STORY.

Royal Exchange Assurance.—Fit up Venetian window west front, which lights both stories, as follows:—Oak moulded frame; jambs and muntins 5 inches × 7 inches deep; the transom 9 inches × 6 inches; the head 7 inches deep, with 2 inches added for carving. Oak frame for semi-fan to correspond 7 inches × 5 inches, and oak carved centre out of 9 inches × 5 inches; oak sill for frame and fan 7 inches × 5 inches, with copper tongue in oak, and stone sill and transom; execute sundry mouldings and carvings to these 2 windows, as will be ordered by the Architect, to the extent in value of *50l.* The 8 divisions of frames to be rebated for, and have fixed in, 8 pieces of 2½-inch wainscot moulded sash, prepared for 22 sheets of *polished plate glass;* 16 of them 51 inches × 21 inches, 4 of them 51 inches × 16 inches, 2 of them 70 inches × 16 inches. The bottom of oak sill 6 feet 4 inches above ground-floor; the bottom of sill of fanlight 8 inches above one-pair floor. Allow 5 feet cube fir for trimming, and fix 1¼-inch sunk and staff-beaded apron, moulded nosing, 1¼-inch bar balusters, and wainscot moulded handrail 3 inches × 2 inches, with rounded ends in the mezzanine floor, with circular corners; 2 inch deal, 2 sides, framed and moulded skeleton window back, rebated and filled in with 2-inch wainscot casements, the centre pair folding, hung with 3½-inch brass butts; two 9-inch brass flush bolts, and a casement mortice latch; the casements to be glazed with *polished plate glass,* 4 squares 26½ inches × 45 inches, 4 ditto 26½ inches × 14 inches; and allow *10l.* for sundry fittings, beyond what are shown and described, connected therewith. Four 2-inch framed and moulded pilasters 1 foot 8 inches wide, 15 feet high, with moulded and mitred caps, 12 inches girt, and moulded plinths 12 inches high, mitred round, glued in rebates, and to be continued along window backs; grounds on wall for these pilasters; moulded surbase 8 inches girt on window back below these pilasters. Take all rebates and grounds needful.

4 similar pilasters in mezzanine story, 9 feet 1 inch high, and to be 1½-inch deal only. No window back on this story. Fix inside on the one-pair stairs windows 1¼-inch plain keyed window back 10 inches wide, 8 feet 6 inches long, with mitred narrow capping tongued, 2½ inches × 1 inch; 2 block plinths 13 inches × 10 inches. Semi-moulded architrave 12 inches girt, and narrow grounds for pilaster. Allow *15l.* for outside shutters to ground-floor windows.

Fix 2 small windows west end, 1 to be 9 feet × 2 feet 10 inches, the other 9 feet × 1 foot 6 inches net; frames and sashes as to the one-pair windows, glazed with plate glass, 4 sheets 14 inches × 25 inches, 4 sheets 30 inches × 25 inches.

Fix inside 1½-inch deal window board, with moulded nosing and hollow; 1½-inch 2 panel bead flush and square shutter and back flaps, shutters in 1 height; 3 pair of 3-inch butts; 3 pair back flaps; brass shutter latches and knobs; shutter bars; 1½-inch 1 panel bead flush and splayed soffit; 1¼-inch bead flush back linings; 1¼-inch boxing and moulded architrave 9 inches girt;

narrow grounds for plaster, but no return linings. Fit up window in strong room with iron sash glazed with sheet glass.

East Area.—Fit up 2 windows to staircases each side of tower, ground story, as follows:—Semi-head 4 feet wide, whole height 8 feet 6 inches; deal-cased frames, oak sunk sills, 1¼-inch wainscot pulley styles only, and 2¼-inch wainscot moulded sashes glazed with sheet glass, double hung, patent lines, iron weights, sash fastenings, inside boxing shutters in 6 folds as high as springing; 1½-inch bead flush and square shutters and back flaps framed, 2 panels hung in 1 height; 3 pair 3-inch butts, 6 pair back flaps, shutter bars, brass shutter latches and knobs; 1½-inch window board with bead on edge flush with stucco; 1¼-inch bead flush linings; 1½-inch boxing with flush bead on outer edge; 1¼-inch soffit to boxing of shutter, rebated for stucco soffit; bracket out for splayed stucco soffit.

Banking House and Unappropriated Offices over.—The great west window to be like the corresponding one, including every article and provision for extra work, except as follows:—That the finishings inside on one-pair story will be wainscot, and the glass plate glass; and the window-back on the ground story will be 7 feet 6 inches high, and the pilasters 16 feet high.

The 2 small windows, ground story, will be like the others opposite. The 2 small windows, which light staircase from the ground to the mezzanine story, to have deal cased frames, oak sunk sills, wainscot edges, pulley pieces, and beads; 2¼-inch wainscot moulded sashes double hung with catgut lines, brass axle pulleys and lead weights; copper tongue to oak sill; 2 sash fastenings; to be glazed with plate glass, 2 squares to 1 window 14 inches × 21 inches, and 2 to another 19 inches × 23 inches. Fix inside 1½-inch deal tongued, splayed, and staff-beaded linings, and 1½-inch deal tongued and rounded window boards and bearers, with moulded nosing. These and all other window boards throughout to have mitred returns, and to be cut to fit splayed jambs of windows.

Fix to the 8 windows in the mezzanine story deal cased frames with flat arched heads, oak sunk sills, wainscot pulley styles only, and 2¼-inch wainscot moulded sashes glazed with sheet glass; the sashes double hung, patent lines, iron weights, brass axle pulleys, and patent sash fastenings. Fix inside 1¼-inch 2-panel bead-flush window back to all but 1 window which lights staircase, which is to have 1¼-inch splayed, tongued, and staff-beaded linings to bottom and 2 sides, and the soffit to be plastered.

Narrow tongued capping to window backs, 1¼-inch tongued and staff-beaded linings to sides, and also to flat arched soffits of the 7 windows.

WINDOWS, BASEMENT STORY.

Fix to the 8 windows, 6 to basements of shops in east area, and 2 to shops on the south side, deal cased frames, oak sunk sills, 2-inch deal ovolo sashes, double hung with patent lines and iron weights, glazed with second glass; fix a sash fastening to each; 2 of the windows 4 feet × 4 feet net; 2 of them 2 feet 10 inches × 4 feet net; and 2 of them 1 foot 6 inches × 4 feet net; the other two 4 feet 8 inches × 4 feet 8 inches net.

Fix to these windows 1½-inch tongued and rounded window boards, and 1-inch tongued and rounded linings.

Fix in window of water-closets of the Banking-house, in the north-west angle, similar frame and sashes, glass, and ironmongery complete, but to be a triple frame, 7 feet × 4 feet 8 inches; and fix inside 1½-inch tongued, splayed, and beaded linings.

Skylights, &c.—2½-inch one side dovetailed kerbs to skylights, 10 inches wide, and metal skylights secured down, and glazed with sheet glass in squares, 12 inches wide, and 2 laps in each. This description applies to all the sloping skylights shown in Plan of roofs No. 6, excepting great west roof.

Fix to roof of Reading-room, in Lloyd's rooms, *circular lantern*, as follows, and as is shown in Drawings Nos. 18 and 19:—oak sill, 9 inches × 5 inches, bolted at joints, wrought, sunk, rebated, and grooved; oak muntins, 7 inches × 4 inches, double rebated and beaded, and extra carved, for which allow 6*l.* 10*s.* for the labour of carving; oak rebated and beaded head, 7 inches × 2½ inches; circular for head above, 7 inches × 6 inches. Frame conical roof over, with rafters, 6 inches × 2½ inches, framed to plate, and an oak ridge block, 12 inches × 12 inches × 8 inches; 1 turned oak terminal, framed in, out of 15 inches × 5 inches × 5 inches; 8 cross-ties to rafters, 6 inches × 3 inches; 1¾-inch deal lining, wrought to circular head, and inch soffit to eaves, circular 2 edges; the roof to be boarded with ¾-inch deal, bent; and fix tilting fillet, and rolls for lead; ¾-inch rough jointed to sides below sill, and complete the spandrils of flat with 1¼-inch boarding and timber needful. Fill in sides with 8 metal lights, 3 feet 6 inches × 8 feet, glazed, of the prime cost value of 96*l.*, including a ventilator in each.

To fix in opening in lead flat, east end of upper roof of the London Assurance offices, to the octagonal opening in lead flat of the Royal Exchange Assurance offices, and to the elliptical opening in lead flat over the entrance to the Unappropriated offices in one-pair story, 2-inch copper moulded *skylights*, glazed with sheet glass; and fix to each a large ventilating cap, with brass frame, chains, and balance weight complete.

Fix in the spandril of the ceiling of Lloyd's room, 12 frames with elliptical heads, 6 inches × 4 inches, wrought, rebated, and grooved, and moulding worked on edge, 3 inches girt; fix on them 2-inch moulded copper sashes, of elliptical shape and ornamental pattern, glazed with ground sheet glass; fix to these and other sashes 20 *ventilators* of the value of 35*l.* 15*s.*

Provide and fix a *sskylight*, as will be directed by the Architect, in the flat over staircase to the Unappropriated offices, including all works in each trade, to the extent, in value, of 15*l.* above and more than the saving to be made by omission of lead flat. The Contractor to provide for 2 skylights and flats over part of shops south side of east area, including all trades, to the extent in value of 50*l.* for the two.

Generally, all directions and descriptions of workmanship connected with Joiners, hereinbefore given, to apply, as far as they are applicable, to the Joiner's work of the windows and their fittings. The bottom beads and bottom rails of sashes, and also the meeting rails, to be splayed, that they may shut close, and open easily; all joints to circular heads of frames to be bolted, and all bolt heads covered.

Provision.—To execute extra works connected with windows and skylights, beyond all other works shown, described, or provided, which the Architect shall direct, to the extent of 300*l.* in value.

STAIRCASES.

Enclose the staircases leading to basement story, as follows:—

London Assurance.—2-inch, bead flush and square, spandril and door, with circular corner; the door to be a sash door, glazed with second glass, hung with 4-inch butt hinges, and fix to it a good mortice lock; rebate and angle bead to framing, rebate and beaded stop to door, and iron stubbs top and bottom to fix spandril into stone.

Royal Exchange Assurance; Banking-house, North-west Angle; Unappropriated Offices, North Side.—Fix spandril partition, door, ironmongery, and glass, as the last.

Lloyd's.—Fix spandril partition, door, ironmongery, and glass, as the last, but wainscot instead of deal.

Prepare and fix *wood staircases*, as follows:—

Royal Exchange Assurance, South Side.—1¼ best deal steps, inch risers, tongued, moulded nosing, the whole housed to

1½-inch rebated wall strings; and to be cut, return moulded, and mitred to 2-inch cut, sunk, mitred, and staff-beaded wall string. The whole to be glued, blocked, and bracketed for plastering, and landings to match with framed bearers. Wainscot handrail, 3 inches × 2¼ inches; 1-inch bar balusters dovetailed; wrought-iron newel and bolt, and balusters, and straps; narrow ground and torus moulding to string; moulded nosing, 1¼-inch apron lining to match, with handrail and balusters also to match.

To fix, to ascend to the upper rooms of Lloyd's, a similar staircase in every respect, but varied in plan, for which see drawings.

The small staircase in the Royal Exchange Assurance to be plain 1¼-inch, with rounded nosing, and plain 1½-inch wall string; the steps housed to it, and to a continued newel.

Fix a similar staircase to ascend to porter's room in the Unappropriated offices.

Handrails.—To provide and fix the following handrails, for the stone and iron staircases, to be made of fine selected Riga wainscot:—46 feet run moulded handrail, 3 inches × 2¼ inches, grooved for iron rail; 4 feet run do. circular; 40 feet run do. wreathed; 4 pieces of wreathed and twisted do. of the prime-cost value of 10*s.* each; 4 mitred caps; 1 large do.; 4 extra to ramps in caps:—170 feet run moulded handrail, 4 inches × 2½ inches, grooved for iron rail; 24 feet run do. ramped; 18 feet run do. circular; 123 feet run do. wreathed; 1 mitred cap; 3 pieces of wreathed and twisted to semi, of the prime-cost value of 15*s.* each; 1 do. do. to curtail; 106 handrail screws; 14 ends of handrail let into wall:—65 feet 10 inches run moulded handrail, 6 inches × 4 inches, in 3 thicknesses, glued, screwed, and grooved for iron rail; 3 feet 6 inches run do. circular; 31 feet run do. wreathed; 1 piece of ramped do., with large mitred cap; 46 strong handrail screws.

Provisions.—Provide for extra work to Lloyd's staircase, to the extent in value of 50*l.* Provide for the 34 cylindrical iron staircases as follows:—527 feet superficial 1-inch deal staff-beaded apron; 263 feet 6 inches run rounded nosing, 2½ inches × 1¼-inch; 263 feet 6 inches do. do. 2½ inches × 1½ inches; 204 mitres to do.; 3672 feet run 1-inch deal dovetailed balusters; 263 feet 6 inches run wainscot moulded handrail, 2 inch × 1⅛-inch; 952 feet run do. do. to the wreathed outer string, grooved and fitted to iron rail, fixed with screws; 204 newel caps, cut and mitred out of the solid; 300 joints, screwed or otherwise strongly secured. Provide for cutting for iron staircases 34*l.*

To fix in Lloyd's rooms some pillars of such form and materials as the Architect shall direct, and of the value of 270*l.*

All the prices and values given in this part of the Specification to be the prime-cost value of labour and materials, whether so written or not.

Provision. — To execute sundry extra fittings which the Architect shall order, to the extent in value of 1600*l.*; and this sum is to include the Contractor's profit, which he is to have upon extra works, according to the conditions of the contract.

All the works for which provision is made, in quantity, price, and sums of money, are to be examined, measured, and valued, and the excess or deficiency in quantity, or value, to be estimated according to the conditions of the contract, and allowed for accordingly.

SMITH AND FOUNDER.

MATERIAL AND WORK.

All the *castings* are to be made at some foundry approved by the Architect, and are to be placed in the stove-room, and heated to a high temperature, in which state they are to be covered with linseed oil, which is to be well rubbed in. All the castings must be perfectly sound and smooth, correctly placed, bedded, and run with lead at their respective proper levels. All the *wrought-iron* work to be of the best English iron; and the quality and strength of every article, particularly the castings, must be submitted, in the presence of the Architect or some person appointed by him, to a full proof, at the expense of the Contractor, before it is removed from the foundry. All defective castings, or other work found upon trial to be insufficient from bad workmanship or materials, are to be immediately replaced; and all the cast-iron work is further to be secured from rust by 1 coat of *lithic paint* when delivered on the works, and all wrought-iron with 3 *coats of oil colour.*

Ground Story.—Fix 2 cast-iron beams, to assist in carrying floor in south-west angle, to weigh together 58 cwt.; also 3 cast-iron pillars with moulded caps, to weigh together 34 cwt., one of these in south-west angle, and two in north-west angle; the pillars cleaned off for painting. Lay 6 lb. sheet lead under bearings of beams 18 inches × 12 inches, and under bearings of pillars 18 inches × 18 inches. Provide and deliver iron work described with carpentry.

Mezzanine Story.—Fix 4 cast-iron beams in south-west wing, and two cast-iron beams in north-west wing, to carry floors; also 2 cast-iron beams in retiring-room adjoining Lloyd's staircase; these eight beams to weigh together 238 cwt. Fix in north-west wing 2 cast-iron pillars, and in south-west wing 1 cast-iron pillar; these three pillars to weigh together 28 cwt. Fix sheet lead under bearings of pillars and beams as described before. Provide the iron work described with the carpentry of this floor.

One-pair Floor.—Fix the 46 large *cast-iron beams* marked L. over ambulatory; the 60 beams marked N., and the 12 beams marked M., as they are delineated in Drawing No. 8; also 10 other cast-iron beams under floor in north-west angle; 3 ditto in south-west angle; 6 ditto in south-east angle; 3 ditto in north-east angle; and 2 ditto over rooms on north side, according to drawings to be given hereafter: these twenty-four additional iron beams to weigh together 447 cwt. 3 qrs. and 7 lbs. To provide and fix also to the stone staircases 5 cast-iron beams, according to drawings to be given, to carry ends of steps across openings in wall, to weigh together 77 cwt.; two of these bearers to have circular ends. All these beams to have sheet lead under their bearing ends, part 18 inches × 12 inches, part 14 inches × 14 inches, and part 8 inches × 8 inches. Provide and fix on this and other floors wrought-iron tie bolts to secure fire-proof and other arches to the extent of 50 cwt. Provide and deliver to the carpenter all iron work to be fixed by him, and described with the carpentry of this floor.

Roofs and Flats.—Fix 1 cast-iron beam to Reading-room roof, and a similar one to small roof north side of Tower; 3 iron beams to flat over staircase of Lloyd's; 3 iron beams to carry roofs and flats over the Captains' room in north-east angle; 1 to carry east end of upper roof of the London Assurance; 3 long beams to central part of great west roof; with 10 other beams, and 1 beam to lower span roof of London Assurance. These 23 beams are to be flanched, and to be cast according to drawings to be given hereafter, and are to weigh together 703 cwt. Milled lead to be laid under all the bearings of these beams also. Provide and deliver to the Carpenter all the iron work to be fixed by him, and described with the carpentry of the roofs. Provide and fix other cast-iron similar beams, which the Architect may direct, to the extent of 600 cwt. to the floors, and to the extent of 200 cwt. to the roofs, over and above what is shown or described; and provide and lay pieces of lead, as will be directed, under the bearings of these additional beams or castings provided, to the extent of 9 cwt.

The *cast-iron beams*, and other castings, to be cast with *flanches*, and *holes for bolts*, as will be directed and shown in drawings; and the Contractor is to drill holes in the castings delivered on the premises, as may be afterwards deemed necessary, to the extent of 1500 holes in 1¼-inch iron.

Provide proper *patterns* for all the *castings* described, except the additional weight of 800 cwt. provided for extras, and submit them to the Architect for his approval.

Provide and deliver 200 additional *socket beams* and *corbels*, beyond what are shown and described, of the weight, collected together, of 50 cwt., and provide 8 patterns for the same.

Run with lead 240 caulkings at ends of beams, and use 15 cwt. of lead in the same.

Provide and deliver to the carpenter, beyond what is described with carpentry, 65 cwt. of wrought-iron in bolts and straps.

Provide and deliver to bricklayer 25 cwt. of wrought-iron in chimney and bearing bars, and 250 cwt. of hoop-iron of a gauge varying from 1½ inch × $\frac{1}{16}$ inch to 1 inch × $\frac{1}{16}$ inch.

Provide and deliver 150 cwt. of wrought-iron in chain bars, with caulked ends, and including in the weight about 20 rings; and perform works needful in fixing them and running them with lead.

Provide and fix 63 framed *area gratings* to the shop fronts in external façade and in east area; and, as the sizes are not yet determined, being subject to the judgment of the Commissioners of Paving, the Contractor is to make them to an extent in weight of 119 cwt., and with 326 caulkings run with lead. The Contractor is also, in addition, to construct 44 flaps in the gratings with hinges, made on the best construction, and capital padlock, and also a roller to each for shutters to slide upon, in proper frames, with steeled pivots and brass boxes.

Provide and fix also 44 strong cast-iron *scrapers* run with lead; 11 handsome perforated coal plates and chain bar fastenings; and forty-five 10-inch cast-iron grates and traps.

Provide and fix a cast-iron *ornamental guard* to the semi-window over west doorway, as will be directed by the Architect, to the extent in value of 24*l.* 16*s.*, including patterns and fixing. Provide and fix 4 enriched *cast-iron panels* in partitions in Lloyd's rooms, as will be directed by the Architect, to the extent and value of 100*l.*, including cost of patterns and fixing.

Execute such works as the Architect may order, in the construction and fixing the vane on Tower, to the extent of 120*l.*

Provide and fix 98 cwt. of cast-iron in moulded and rebated ribs cleaned off for painting, for 4 large sloping skylights in the great west roof, containing in the whole 9 divisions, 18 pieces, and 2 cross bearers under one skylight; together with 6 cwt. of wrought iron in bolts and coupling plates for ditto, and 1 cwt. 2 qrs. of lead for joints and running ditto.

Provide for the payment of the sum of 10*l.* for patterns for these castings.

Provide and fix 312 feet run of *cast-iron gutter* and trough round open area of Exchange; the lower casting a plain trough, the upper casting to have perforated top, of a pattern to be given; 54 cwt. of iron in lower castings; 84 cwt. of iron in upper castings. The joints to be rebated and fitted; 4 with angle pieces; 8 pieces to be cast with short lengths of 5-inch pipe. To provide patterns to the whole complete.

Provide and fix, for carrying off water from great area, as follows:—4 elbow pieces of 5-inch stout cast-iron pipe, 4 feet 6 inches long; 112 feet run very strong *cast-iron 5-inch pipe*, in 8 stacks, and a *shoe* at bottom of each. To provide proper patterns, and run the joints of the pipes and shoes with lead.

Provide, fit, and fix complete, including all patterns, 34 *cylindrical staircases of iron*, of 2 flights each, containing as follows:—497 cwt. 1 qr. cast iron, in 1326 open, ornamental, perforated treads to winders, with small flanches and bolt holes, all of one pattern; 34 cwt. cast iron in 68 treads to bottom steps, of a different pattern to the others; 284 cwt. 2 qrs. 14 lb. cast iron, in 1326 open ornamental risers, all of one pattern, cast with small flanches and bolt holes, and with an open socket-casting at the end, to drop one into the other, and form a continued newel; 17 cwt. cast iron in 68 bottom risers, of a different pattern from the others; 66 cwt. 3 qrs. wrought iron in 3788 balusters of ¾-inch drawn iron, filed up and fitted with screw end, bolted to tread and riser, and rivetted to wrought-iron top rail. Also 22 cwt. of wrought iron in 204 newels, with bolt ends, secured to handrail; 8 cwt. 2 qrs. of wrought iron in 1000 feet lineal of wrought-iron top rail rivetted to balusters and newels, and forged, filed, and fitted to wreathed outer edge of staircase. To provide for making ornamental wood patterns and moulds; also a set of metal patterns, properly cleaned up and fitted. To provide for cleaning off, fitting, and fixing castings. To provide all nuts, small bolts, rivets, and pins, and drill all holes needful.

Provide and fix the following *railings to staircases*:—95 feet run wrought-iron top rail, 1 inch × ⅝ inch, screwed to wood rail with inch square plain bars, rivetted, fixed complete, and run with lead to stone; 90 feet 3 inches run wrought-iron rounded top rail, 1¾ inch × ¾ inch, rivetted to, and including seventy 1¼-inch square balusters, 3 feet 2 inches long, and 4 newels, including ramps, fixed complete, and run with lead to stone; 35 feet run ornamental railing, fixed complete, and run with lead, of the prime-cost value of 10*s.* 6*d.* per foot run; 287 feet run of ditto, ditto, ditto, 15*s.* per foot run, prime-cost value; 6 feet run ditto, ditto, circular ditto, of the prime-cost value of 18*s.* per foot run; 101 feet 4 inches run ditto, including mortices and fixing, of the prime-cost value of 42*s.* per foot run.

Provide and fix 1 newel of the prime-cost value of *5l. 5s.*

Provide and deliver to carpenter 22 *wrought-iron balusters,* with straps and screws fixed by him. Also 15 wrought-iron turned *newels,* with bolts, for the wood staircases and railings.

Provide and fix *gates* as follows:—4 pair of gates, each in 2 leaves, and all with semi-arched heads. 1 pair, 11 feet 6 inches wide, 19 feet 6 inches high, made to slide. 1 pair, 12 feet 4 inches wide, 22 feet high, hung. 1 pair, 9 feet 8 inches wide, 21 feet high, hung. 1 pair, 11 feet 2 inches wide, 22 feet high, hung. To be formed of castings, enriched on face only, cleaned out in the most perfect manner, and fitted to wrought-iron frames. The patterns will be similar in design to all, but will be altered to suit the different sizes of the gates. The wrought-iron frames to be well forged, and filed to a fair face, with all chamfers, moulded edges, heels, rebates, rebated stops, &c., needful. To contain in weight, when delivered on the premises, including hinges, bolts, and all work, as follows:—253 cwt. fine ornamental castings, cleaned up for bronzing, averaging 3 cwt. each; 59 cwt. wrought-iron frames, forged, welded, chamfered, moulded and filed up.

4 gun-metal wheels, 9 inches diameter, with strong axles, fitted with proper carriages, to 1 pair of gates.

1 wrought-iron tram-rail, filed up, 24 feet long, 3 inches × ½ inch, with flanches fixed in groove cut by mason, and run with lead.

4 wrought-iron guides, 10 feet long, together of the prime-cost value of *25l.*

3 lower pair of steeled pivot hinges, with cast-iron boxes, bushed with brass, of a suitable size for such gates, fitting them and running them with lead.

3 upper pair of steeled ball and socket hinges, with massive moulded brackets, and fangs suitable for such gates, and letting in and running with lead.

4 rack bolts, in 2 lengths, of wrought-iron, filed up, with steeled ends and proper socket plates complete, 22 feet long.

4 boxes of wards, with capital crank and lever handles to open

and shut gates, and with large steeled lock, bolt, and key, and 2 master keys for the set.

To pay, for patterns to be made, according to drawings to be provided by the Architect, 300*l.*

The whole to be fitted and fixed complete, including lead and running.

To provide and fix 1 pair of dwarf *wrought-iron gates*, of the value of 35*l.*, including cutting mortices, and running with lead.

Bills, Certificates, and Statements.—The Contractor, or his workmen, to leave with the Clerk of the Works, when the articles are delivered, *bills or certificates of the weight* of all ironwork for which weights, quantities, and values have been provided in this Specification; as well as of all other ironwork which he may deem more weighty or costly than shown or described; and also of any ironwork of which the Clerk of the Works may desire to know the weight. And the Contractor is to deliver also to the Clerk of the Works bills or statements of labour and expenses incurred in making those patterns, moulds, and models, for the cost of which sums of money are provided to be paid by the Contractor in this and other parts of the Specification.

All the variations in weights and values of the Smith, including not only those, which are shown and described, but also those for which certain sums of money are provided to be paid, are to be taken into account, and valued and allowed for either way, according to the conditions of the contract.

All values of work specified, and all sums of money provided, are to be considered the prime-cost values of such works, exclusive of the Contractor's profit, and are to be so considered in making the valuation of extras and omissions.

SLATER.

All the roofs to be slated with *Bangor rag slating* complete, with 3 copper nails to each slate. All kerbs above lead flats to be slated with ½-inch imperial slating.

To make all needful allowance for covering and preserving slating after it is done, and for the complete reinstatement of any part, that may be injured in the construction and finishing of the upper parts of the building, so that the whole may be delivered up in perfect condition.

PLASTERER:

INCLUDING ALSO BRACKETING, AND SOME OTHER CARPENTER'S WORK CONNECTED THEREWITH.

All the lath-work to be done with the best 1½-laths, and wrought nails. The work to the great ceilings of portico and ambulatory to be done with double laths and strong wrought-iron nails. All ceilings to the best rooms, and all beams, soffits, friezes, panels, margins, and other similar parts, to be finished in putty and plaster. The hair mortar or coarse stuff to be composed of equal parts of lime and clean sand, and 1 lb. in weight of strong black hair to be used with 3 cubic feet of lime. The plasterer to find his own moulds, which are to be edged with copper.

All sides not painted to be coloured. All ceilings whitened; the best ceilings which are finished with putty and plaster, and all moulded and enriched work, to be distempered; the plain work in 1 tint, the other work a different tint. The external work to sides will be coloured to imitate the stone.

To find all suitable and additional scaffolding required for this work, and to adopt all proper means for the preservation of it. To be careful in the selection and cleansing of the materials used; and to cut out any blisters or defects, and reinstate every defect and injury in the work before it is painted, coloured, whitened, or distempered, and to prepare the work for it. Also to put up a second time all scaffolding needful to execute these finishings in a proper manner, and deliver the work up complete and perfect.

INTERNAL PLASTERING.

Basement Story: Royal Exchange Assurance, including 3 Rooms, Closet, and Staircase.—These ceilings to be rendered 2 coats, and set on arches. 2 ceilings to be lathed, plastered 2 coats, and set. The sides to be rendered and floted in Roman cement, to the height of 4 feet, and the remainder rendered 2 coats and set. Rounded angles formed in cement and plaster, instead of wood beads.

London Assurance Staircase.—Render 2 coats and set arched ceiling; sides to be rendered and floted in Roman cement.

The 2 Staircases adjoining Tower.—The sides to be rendered and floted in Roman cement.

Unappropriated Offices Staircase.—Render 2 coats and set arched ceiling; sides to be rendered and floted in Roman cement.

Banking-house.—Render 2 coats and set arched ceilings of staircase and passage. Lath, plaster, 2 coats, and set ceiling of kitchen. All sides to be rendered and floted in Roman cement, to the height of 4 feet, and the remainder rendered 2 coats and set. Rounded angles instead of wood beads.

Basements of Shops.—Lath, plaster, 2 coats and set ceilings; sides to be rendered and floted to the height of 4 feet, in Roman cement; the remainder rendered 2 coats and set; rounded angles instead of wood beads.

Ground Story: Royal Exchange Assurance.—Lath, plaster, flote, and set in putty all ceilings, including groin ceiling of north entrance; but except arched ceiling of recess, which will be on brick. Plaster beam to entrance, and fascia round on walls; east and west sides to correspond; cornice, 18 inches girt; bracketing, 9 inches girt; 1 flower, 2 feet diameter; 1 ditto, 1 foot 6 inches diameter. Mastic sub-plinth, 3 feet 6 inches high; mastic plinth above and to entrance to correspond with plinth of staircase. All sides to be finished in trowelled stucco for paint. All soffits to be finished in trowelled stucco, with beads and quirks; moulded cornice round office, 2 feet 6 inches girt; bracketing to ditto, 15 inches girt; no beam in this ceiling. 4 moulded brackets of the prime-cost value of 21*s.* each, and a centre flower 1 foot 6 inches diameter for groined ceiling; the cornice not to be continued across the 2 great windows.

London Assurance.—Sides of staircase to be jointed, as also in 2 staircases adjoining Tower, and *Unappropriated offices.*

Banking-house.—Lath, plaster, flote, and set ceiling in putty and plaster; no beams; moulded cornice to Bank, 2 feet 6 inches girt; bracketing to ditto, 1 foot 3 inches girt. Moulded cornice to entrance and 2 rooms, 2 feet girt; bracketing to ditto, 1 foot girt; the cornice is not to be continued across 3 great windows: 2 centre flowers, 2 feet diameter in entrances; mastic sub-plinth in the north entrance, and mastic plinth to entrances, as to staircase. All sides to be finished in trowelled stucco for paint.

The Shops.—Lath, plaster, flote, and set ceilings; bracketing, 12 inch girt, and plastering to 2 sides under offsets for plates; render, flote, and set sides; semi-arched soffits, floted and finished with beads and quirks: wood beads and quirks above linings.

Mezzanine Story: Royal Exchange Assurance.—The sides and ceiling of strong room to be rendered and floted in Roman cement for paint. The Treasury, Accountant's room, and staircase to be executed the same as office on ground story, including sides, ceilings, cornices, and bracketing.

London Assurance Staircase and Unappropriated Offices.—Sides of staircase finished in rough stucco, jointed.

Banking-house.—Lath, plaster, flote, and set all ceilings; moulded cornices in passage 12 inches girt, and in staircase and sitting room 18 inches girt, bracketing to all 9 inches girt; in 3 chambers, cornices 9 inches girt; sides of staircase, passage, and sitting room finished in trowel stucco for paint; sides of kitchen and scullery, rendered, floted, and set; sides of 3 chambers, rendered, floted, and set.

Shops.—Render, flote, and set all ceilings and sides.

One-pair Story: Royal Exchange Assurance Court Room.—Lath, plaster, flote, and set in putty and plaster ceiling and cove; moulded band on ceiling, with 2 circular corners, 1 foot 6 inches girt; bracketing for ditto, 9 inches girt; bracketing for cove 8 feet girt; Ionic entablature round room, 3 feet 9 inches high; cornice 2 feet 4 inches girt; bracketing to ditto, including top, 3 feet 3 inches girt; top, 1 foot 6 inches wide; plain frieze, 9½ inches wide and firrings; architrave, 1 foot 5 inches girt; bracketing for ditto, 1 foot girt; Ionic blocks, 11½ inches apart from centre to centre, 7 inches × 5 inches × 4 inches; 5 enrichments, one 3 inches girt, two 2 inches girt, and two 1½ inches girt; a panel, 4½ inches square, with moulding round in soffit between each block; a flower in each panel 4 inches diameter; part of panels will be radiating; 1 centre flower 4 feet diameter, and moulded band, 12 inches girt, round ditto.

Committee Room.—Lath, plaster, flote, and set in putty and plaster, ceiling and cove, the cove 3 feet 6 inches girt; Ionic cornice round, as last, with blocks and panels, but no frieze or architrave, and 3 enrichments, one 3 inches, one 2 inches, one 1½ inch. The cove to project 2 feet 4 inches; moulded band on ceiling on edge of cove 12 inches girt; bracketing to ditto 7 inches girt; 1 centre flower 3 feet 6 inches diameter.

Lath, plaster, flote, and set all other ceilings; moulded cornice in all other rooms 30 inches girt; bracketing to ditto 18 inches girt; a dentil cornice in all passages 24 inches girt; bracketing to ditto 12 inches girt; no cornices under stone landings. 4 dentils in each lineal foot, 4 inches projection, 3 inches high; moulded cornice 3 inches girt under landing of wood staircase, south side; all sides finished in trowel stucco for paint; all soffits finished in trowel stucco for paint, with beads and quirks.

The strong room to be finished like strong room below; moulding round octagonal skylight 18 inches girt.

London Assurance.—The Court, Governor's, and Committee rooms to be finished in every respect like the Committee room, Royal Exchange Assurance, including all coves, bands, cornices, &c.

All other ceilings to be lathed, plastered, floted, and set; moulded cornice in small rooms 12 inches girt; bracketing to ditto 6 inches girt; moulded cornice in 4 rooms 30 inches girt; bracketing to ditto 18 inches girt; dentil cornice to passage as before. All sides finished in trowel stucco for paint.

Fix moulded band round 2 openings in passage ceiling 18 inches girt; bracketing for ditto 12 inches girt; 4 centre flowers to best rooms 3 feet 6 inches diameter.

Unappropriated Offices.—Lath, plaster, flote, and set in putty and plaster ceiling of Board and Committee rooms, and fix round the same Ionic entablature, as described to Court room of Royal Exchange Assurance, but no cove or bands in ceiling; 1 centre flower, 4 feet diameter, with moulded band; 1 ditto 2 feet 6 inches diameter. Lath, plaster 2 coats, and set all other ceilings. Moulded cornice to 2 offices and Secretary's room 30 inches girt; moulded cornice, 18 inches girt, to 2 waiting rooms; bracketing to all 9 inches girth. Dentil cornice to entrance passage 2 feet girt; dentils 4 to each lineal foot 3 inches high, 4 inches projection; bracketing to ditto 1 foot girt. All sides and soffits to be finished in trowelled stucco for paint; the soffits finished with beads and quirks.

Second Story, Royal Exchange Assurance.—Lath, plaster, flote, and set all ceilings. Cornice to passage, landing, and Luncheon room, 9 inches girt. Hopper sides done as ceilings. Render, flote, and finish with trowel stucco for paint, all sides in area up to skylight, and in landing, Luncheon room, kitchen, and room adjoining, as well as in long passage; the quartering to be extra lathed. Fix round area level with floor moulded stucco string 20 inches girt. All other parts not before described to be floted work, part on laths.

London Assurance.—Lath, plaster, flote, and set the ceilings; staircase ceiling set in putty and plaster. Cornice round this ceiling 3 feet girt, with 35 Doric moulded blocks, 9 inches × 9 inches × 4 inches, and 35 panels 12 inches × 8 inches × 1¼ inch deep, with moulding round; 18 inches of bracketing; 1 flower in ceiling of 3 feet diameter, and plain moulded margin 1 foot girt. The sides of staircase finished rough stucco, jointed; all passages finished trowel stucco for paint; stucco soffits with beads and quirks to arches. The 4 rooms between water-closet and staircase finished trowel stucco, the other 4 rooms floted and set. Cornice to long passage 9 inches girt. All the partitions to be extra lathed.

Entrance and Staircase to Lloyd's Rooms, and Landing of Staircase only on the First Story.—The sides rendered, floted, and finished in rough stucco, jointed; the soffits floted and finished the same, with beads and quirks; mastic moulded plinth, 12 inches high, to all sides and up staircase, and on landings ramped, mitred, and returned.

Lath, plaster, flote, and finish in putty and plaster the ceiling, one-pair landing in 9 panels, and with decorations as follows on lath:—Doric entablature all round, including cornice 33 inches girt, frieze 2 feet 6 inches wide, and moulded band on it 6 inches girt, also top to cornice 10 inches wide, and narrow soffit to frieze, bracketing for frieze 2 feet 6 inches wide, and for cornice and its top 3 feet 1 inch girt; 48 Doric blocks with enriched soffits, mitred to bed moulding, 12 inches × 14 inches × 4 inches; 48 Doric triglyphs 12 inches wide, 17 inches high, each to have a fillet and set of drops under; 48 panels sunk in soffit of cornice 11 inches × 10 inches, and 1½ inch deep, with moulding round, mitred, and 48 pateras 9 inches diameter in panels; 48 flowers 12 inches diameter in frieze. Work the beams between panels 2 each way 16 inches wide, and 1 all round 8 inches wide; the sides of beams round panels to be moulded to girt 21 inches. Fix on beams 4 enriched pendants, 16 inches square and 9 inches deep; bracketing to beams 16 inches wide, and to cornices round panels 16 inches girt.

Bar, Clerk's Room, Room in Tower, Secretary's Room, and Passage and Staircase to Second Story, all in First Story and connected with Lloyd's Rooms.—Lath, plaster, flote, and set ceilings; moulded cornice 36 inches girt, round the Secretary's room, with 3 enrichments, one 3-inch, one 2-inch, and one 1½-inch girt, and fix a flower 3 feet 6 inches in diameter. Fix in all the other rooms cornices 24 inches girt, bracketings 18 inches girt to large cornice, and 12 inches to the other, and bracketing to soffits in angles of Secretary's room and elsewhere; all the sides to be finished trowel stucco for paint; all soffits finished the same, with beads and quirks; partitions extra lathed, and strings of the wood staircase to be done like ceilings.

Second Story of Lloyd's Room.—Lath, plaster, flote, and set all ceilings of the upper rooms and passages, and work cornices 9 inches girt round 2 rooms; all the sides trowelled stucco for paint, including all soffits, which are to have beads and quirks.

Water-Closets, Urinals, Retiring Rooms, and Lobbies connected with them.—Generally, those sides and ceilings not covered with wood to be plastered, and finished to correspond with adjoining and similar parts on the same stories, except as follows:—

The arched soffit of doorway to lobby, and the sides and ceilings of lobby and water-closets in basement of the Royal Exchange Assurance offices, rendered and floted in Roman cement for paint. The sides and ceilings of water-closets on the basement story of the Banking-house, and the sides and ceilings of the two retiring rooms adjoining the staircase to Lloyd's rooms, to be also rendered and floted in Roman cement for paint. The sides of water-closets in basement of shops, not lined, to be also finished the same. The sides and ceilings, where there are arches or ceiling floors of lofts, or cistern rooms over water-closets, to be rendered 2 coats and set, putting lathing where needful.

All the stone staircases and landings, and all passages, lobbies, and entrances connected with staircases, and not otherwise described, to have *mastic* 2-reeded flush *plinth*, scribed to moulded steps, with all ramps, mitres, and mitred returns needful.

Generally, to run and work all arris and quirks, and work all mitres, stops, and returns required. All the modelling to be done by competent persons, from the drawings of the Architect, and the Contractor is to provide for the payment of 70*l.* to modellers for this purpose. All the enrichments to be finely cast, trimmed, and accurately fixed, and the Contractor to find and fix 271 mitre or angle leaves to the enrichments, of the averaged sizes required. A moiety in quantity of the enrichments described will be required to be hollow, trimmed, and put up separately; all flowers also are to be formed in the same manner, and to be fixed with screws; and the Contractor to provide and securely fix 30 blocks in ceiling with strong bolts and brass hooks. The Contractor to execute other enrichments, beyond what are shown and described, for the Court-room of the Royal Exchange Assurance offices, to the extent in value of 20*l.*; and he is also to work and form panels in sides of staircases, and other places beyond what are shown or have been described, and as will be hereafter directed, to the extent in value, beyond the plain work to sides taken, of 100*l.* The Contractor is also to execute additional plastering, or additional enrichment or panelling to the plastering described, beyond what is shown or specified, to the extent in value of 250*l.*

Provide all materials and labour, and execute in a masterly style, the stucco work to the sides and ceilings of Lloyd's rooms, viz., the 2 great rooms, the Captains' room, the Reading-room, and the large landing and lobby between the rooms, but not landing of staircase; all on 1½ laths, with wrought iron nails as follows:—

Ceilings.

Yds.	Ft.		
318	0	sup.	Ceilings in panels, average 4 feet square.
303	0	„	Ditto, ditto with circular ends.
396	0	„	Ditto, elliptical and circular.
	874	„	Groined ceilings.
	1962	„	Coves.
	1980	„	Flat domes on elliptical plans (No. 8).
	1180	„	Pendants of domes (No. 40).
	3180	„	Beams, fascias, and margins.
	2123	„	Ditto, circular and elliptical.
	1872	„	Margin, circular both edges.
	3126	„	Mouldings.
	1827	„	Ditto, in short lengths.
	1640	„	Ditto, circular.
	1872	„	Ditto, elliptical.
	3127	run	Arrisses.
	1814	„	Circular ditto.
	2640	„	Elliptical ditto.
	1817	„	Enrichments 2½-inches girt, cast and fixed.
	735	„	Ditto, circular and elliptical.
	1964	„	Enrichments 6-inches girt, ditto.
	2763	„	Ditto, circular and elliptical.
	2840	sup.	Enrichments, cast and fixed.
	1523	„	Ditto, circular and elliptical.
No.	1836		Mitres to moulding, average 13-inches girt.
	2640		Mitre leaves to enrichments, cast and fixed, average 4½-inches girt.
	384		Brackets 2 feet high, 12 inches projection, and 9 inches wide, enriched on 3 faces, cast and fixed, 3 patterns.
	427		Panels averaging 9 inches, sunk 1 inch, with enriched moulding, fixed and mitred 1½-inch girt; 3 patterns.
	427		Flowers 7 inches diameter, and 6 inches deep, cast and fixed in panels; 6 patterns.

Execute panels, shields, and other decorations and enrichments, beyond what are herein provided, for various parts of Lloyd's rooms, to the extent in value of 350*l.*; and also to *provide* for the payment of the sum of 150*l.* for models to be made from the drawings of the Architect for the decoration of these rooms and places.

Work to Sides of these Rooms and Places.

Yds.	Ft.		
1400	0	sup.	Trowel stucco, in compartments.
180	0	„	Ditto, circular.
	1600	„	Margins, jambs, &c.
	720	„	Ditto, elliptical.
	980	„	Arrisses and narrow margins.
	464	„	Ditto, circular.
	2410	„	Keen's cement, in margins and narrow compartments.
	1800	„	Mouldings, in ditto.
No.	427		Mitres, averaging 9 inches girt.

Execute decorative frontispieces to 24 windows or corresponding recesses, as will be directed, to the extent in value of 7*l.* each.

Execute panelling and other decorations to the sides, as will be directed by the Architect, to the extent in value of 150*l.*

EXTERNAL PLASTERING:

Including Bracketing and Ceiling-floors, Sides and Ceilings of Ambulatory, Portico, Archway in East Façade under Tower, and four other Entrances.

Ambulatory.—Form ceiling floor under arches over Ambulatory with girders, binders, ceiling joists, and bracketing. The main beams with 64 flitches 15 inches × 5 inches, bolted with 1¼-inch bolts, 3 feet 6 inches apart, to the main iron beams.

The other beams to be framed by double tiers of binders 15 inches × 4 inches, framed 2½ inches into main beams. To provide and fix 256 straps 1½ inch × ½ inch, caulked down with staples at each end 2 feet 6 inches long, to secure ends across main beams.

Also 16 straps to hold up binders to iron beams at the angle of Ambulatory, to weigh 40 lbs. each.

Plate all round both sides 5 inches × 3 inches, ceiling joists to the whole 7 inches × 2½ inches; 2-inch bracketing from 2 inches to 3½ inches deep, to soffits of large beams, to sides of panels, and to cornices. 2 circular ribs, 7 inches × 3 inches, in 2 thicknesses, to each large bracket, let into stone templates. Bracketing to spandril sides of brackets 4 inches × 2½ inches. Lath, plaster, and finish the whole of the ceiling, and all decorations in stucco, as is shown and described in Plan No. 3, in sections Nos. 13 and 14, in Drawing No. 21, and generally in other drawings. All the sides of Ambulatory not covered with stone to be coated with *Hamlin's patent oil mastic.*

Portico and West Entrance.—The 4 small semis to be finished in *mastic* plain; the 2 large semis also in mastic; each of these will have a moulded architrave or band, 2 feet × 9 inches girt, in mastic; and the Contractor to execute panels and decorations to these 2 large semis to the extent in value of 200*l.*

The 3 *arched ceilings* to be formed of ribs; those to the smaller ceilings to be 9 inches × 4½ inches net, the inner edge cut true, the outer edge left rough, got out in 3 thicknesses, and bolted with twenty ⅝-inch bolts to each; 5 ribs will be required to each of the 2 ceilings. The ribs to the larger ceiling will be 12 inches × 4½ inches, made in the same manner; they are to be tenoned into the stone architrave; 7 will be required, and they are to be bolted with 30 bolts to each. The 5 horizontal binders at the back to be 8 inches × 4½ inches, let into brickwork at each end, on oak templates 30 inches × 9 inches × 6 inches, and notched and bolted to the ribs with ¾-inch bolts in each of the small ceilings, and 9 similar to the great ceiling 10 inches × 4½ inches. Upon this skeleton framework fix ceiling joists 3 inches × 2½ inches, forming 3 plain arched ceilings, and construct upon them, with 2-inch framed bracketing, rails, styles, margins, with sides and returns to form 35 hexagonal panels to large ceiling, 9 ditto to each of the smaller ceilings, 24 lozenge panels to large ceiling, 4 ditto to each smaller ceiling, 24 triangular panels to large ceiling, 12 ditto to each smaller ceiling, and 1 long panel to large ceiling, and 2 horizontal long panels 1 foot 3 inches wide, of the same character and with similar enrichment, to each of the smaller ceilings. The large hexagonal panels to be in 2 sinkings, each of 7 inches, and to be worked in stucco, and fix round each panel; and in each sinking, a plain stucco moulding 7 inches girt mitred, and in the lower sinking provide and fix deep enriched flowers 2 feet 9 inches diameter, to project 13 inches, and to be fixed with large screws. The lozenge panels to be also in 2 sinkings of 3½ inches deep each; and round the first sinking a moulding 3 inches girt is to be worked; and in the inner sinking is to be fixed an enriched lozenge patera, projecting 3 inches, fixed with screws. The smaller triangular panels to be each in 1 sinking of 4 inches, with moulding round to girt 3 inches; no enrichment will be required to these panels.

The long panel to be sunk out 6 inches; a moulding round, 4 inches girt, and an enrichment 12 inches girt, trimmed and put up in short lengths, and centred with an enrichment to form centre work by hand.

The ceiling-joists described will form the surface of the larger and deep panels, but those which are not sunk the same depth will require to be firred out.

West Entrance.—The plain ceiling between arches to be in stucco, on double laths, the mouldings and fascia round to girt 2 feet 6 inches; 18-inch bracketing for cornice. The other plain inner ceiling the same; plain cornice, 15 inches girt, and bracketing 7 inches.

The north and south sides under this ceiling to be worked in mastic, including triple key-stones, and circular soffits, 1 foot 7 inches wide, over the doorways.

East Entrance, under Tower.—The groined ceiling, and the 2 semi-spandrils, to be executed in *mastic.*

North and South Entrances.—The two plain circular soffits in each, and the soffits which are circular in upright section, but elliptical in cross and horizontal sections, including long panel in one, and 3 panels in the other, to be finished in *mastic;* the rails and styles dubbed out 3 inches. Moulding, including raised panel, 15 inches girt.

East Entrance from East Area.—The semi-recesses over shop-fronts, mastic; the ceilings and cornice like those to west entrance. Frame a ceiling-floor as follows:—4 binders, 7 inches × 3 inches; ceiling joists, 4 inches × 2 inches.

All the mastic and stucco work to this external plastering to be jointed and distempered, including all enrichments.

Provision.—Provide for the payment of 50*l.* for modelling the enrichments of these external ceilings. And execute a centre ornament in panel in one of the entrances, as shall be directed, to the extent in value of 10*l.*

All values and amounts of provisions for additional and extra works, given in this Specification of plastering, are the prime cost value of the labour and materials necessary for their execution; and all these works, as well as all the works provided to be done in Lloyd's rooms, for which specified quantities are given, are to be measured, and all works done beyond the quantities provided, and which exceed in value the sums provided, are to be valued as extras, according to the provisions of the Contract, and paid for accordingly; and all or any part of such quantities of works provided, and of provisions in money for works to be done, which may not be executed, are to be valued as omissions, according to the conditions of the Contract, and allowed for by the Contractor as a set-off accordingly.

PLUMBER.

All the lead to be the best refined Newcastle W.B. lead. If required, all the lead work shall be cast from the pig, in the presence of the Architect, or some person appointed by him for that purpose. To execute all Plumber's work shown in the drawings and herein described, and also all Plumber's work needful to complete other works and the intended buildings.

All flats to be covered with 8-lb. lead, *lapping* 8 inches at joints, turning up 7 inches against all upright parts against which it abuts, and passing 7 inches at all drips. All *gutters* to be lined with 8-lb. lead, to turn up on slopes, unless otherwise shown, 11 inches, and 7 inches against upright parts. All *cesspools* 12 inches deep, to be lined with 8-lb. lead, with strong soldered angles: all lead in gutters and cesspools to lap 7 inches. Lay 6-lb. lead *flashings* to sloping skylights, dressed down, 2 feet wide at top and bottom, 14 inches wide to sides. Solder into all cesspools a piece of bent 5-inch socket-pipe, made of 7-lb. lead, and averaging 2 feet 6 inches long; 5-lb. milled lead flashings to all parapets, 7 inches wide, and lapping 3 inches at the joints; to all gables stepped in 14 inches wide, in 4-feet lengths, and lapping 3 inches. All *flashings* in masonry to be *burnt in.* All flashings in brickwork to be secured with lead wedges and pointed with cement. Valleys lined with 7-lb. lead, 2 feet 4 inches wide, in 10-feet lengths, lapping 6 inches at each joint. The gutters to be carried over slopes adjoining ends of gutters, with lead the same width and of the same height; 5-lb. lead flashing, 12 inches wide, to gable of west roof of the London Assurance offices. *Stepped flashings* to all shafts, as to gables. Lead to turn up on kerbs of skylights 6 inches, in skylights on flats; and fix flashings round them 14 inches wide, of 5-lb. lead, the inner edge formed to carry off condensed air. The hips and ridges covered with 6-lb. milled lead, in 8-feet lengths, lapping 6 inches, and 2 feet wide, and to be well secured with lead-headed nails and bale tacks. The lead linings of *eaves gutter* to great span roof to be 26 inches wide of 8-lb. lead, and fix to them 2 pieces of 4½-inch socket pipe, 12 inches long, and 2 stacks of 4½-inch cast-iron *rain-pipe,* with angle cistern heads, and shoes, to bring water down to lead flat. Fix in Royal Exchange Assurance offices 2 stacks of 5-inch rain-pipes, made of 8-lb. lead, with strong soldered joints, from the east and west angles of flat down to drains on basement, the 2 bottom lengths of each, and the shoes, to be cast iron of strong quality. Fix a similar stack of iron and lead pipe, but longer, from the west gutter of span roof over Court-room; 5-lb. lead flashings, 12 inches wide, to kerbs, and 7 inches wide on tops of doors and windows in the same, and 10 inches wide in internal angles of slated kerbs, with similar flashings in angles by brick walls. The lead to pass 10 inches over rolls, and 6 inches on slopes of great west roof, which is to be lined with 8-lb. lead; the *sheets of lead* to be in 4 lengths each side, and there are to be no drips, but deep flat grooves are to be sunk in the boarding for the laps of lead, so that the upper surface may be flush and even; the top of the under sheet screwed down and dotted; the bottom of the upper sheet secured with strong bale tacks; the screws 4 inches; the bale tacks of 8-lb. lead; the lead to pass 12 inches at the ridge; 7-lb. flashings, 14 inches wide, burnt into the rakes of gables.

Fix in the London Assurance offices 5 stacks of similar *lead rain-pipes*, 2 from the lower roofs, and 3 from the upper roofs. Fix in the Unappropriated offices 2 stacks of similar lead rain-pipes, with iron pipes at bottom. Fix in Lloyd's rooms 5 stacks of similar lead rain-pipes, with iron pipes at bottom.

Line the trough under floor in the Royal Exchange Assurance offices with 7-lb. milled lead.

Fix 5-inch cast-iron gutter and strong brackets to the eaves of the upper roofs of the London Assurance offices.

Provision.—Lay 100 cwt. of lead in extra flats and gutters more than shown and described, and also 30 cwt. of lead in extra flashings more than shown and described, as shall be directed by the Architect, and to execute 200 feet lineal of burning in or securing such flashings to stone work.

Fix in angles of east area 180 feet lineal of 5-inch rain pipe, made of 8-lb. lead, with soldered joint and handsome astragal bands and tacks; and also 4 large handsome blocked cistern heads for angles. The joints of the 5-inch iron and 5-inch lead pipes to be flanged and made secure, and the joints of iron pipes fixed internally, to be run with lead; and the Contractor to find extra patterns for casting 4 lengths of iron pipe, with bends to clear offsets.

To execute sundry extra works in completing and extending the external plumbing work more than shown or described, to the extent of 100*l.* in value.

Internal Plumbing.—Provide all materials and things, and all labour needful, to fit up and complete all the cisterns, sinks, water-closets, urinals, and other fittings connected therewith, in the various offices and places of the building, as is shown on the Plans and described in the Specifications, and to use in such works, according to the directions of the Architect, the following materials and articles; providing all labour and all customary articles necessary to fix and complete them for use.

Cwt.	qrs.	lbs.	
61	1	21	milled lead and labour in sinks.
188	2	21	ditto ditto cisterns.
250	0	14	

1140 feet 8 inches run, strong soldered angle.

54 patent *pan water-closets*, with large queen's ware basins and apparatus, of the strongest and best quality, fixed, complete.

9 ditto ditto, but with blue basins.

5 patent *valve closets*, with large blue printed basins and best apparatus, fixed, complete.

9 large queen's ware *urinal pans*, with a brass grate and a bell trap, fixed, complete.

9 sets of valves, wires, pulls, handles, levers, &c., to urinals.

63 large lead D traps, made of 8-lb. lead, and fixed with joint.

77 lead valve boxes, made of 7-lb. lead, fixed, and soldered to cisterns.

14 smaller D traps, made of 7-lb. lead, and fixed at bottoms of waste pipes which enter drains, and to safes.

4 three-inch brass *hydraulic lift pumps*, with air-vessels and plank, fixed.

Patent lead pipes, including fixing, wall-hooks, soldered joints, &c. complete, to weigh as follows:—½-inch, 4 lbs. *per* yard lineal; ¾-inch, 7¼ lbs. *per* yard lineal; 1-inch, 12 lbs. *per* yard lineal; 1¼-inch, 16 lbs. *per* yard lineal; 1½-inch to services, 21 lbs. *per* yard lineal; 1½-inch to wastes, 18 lbs. *per* yard lineal; 2-inch to services, 28 lbs. *per* yard lineal; 2-inch to wastes, 24 lbs. *per* yard lineal; 2½-inch to wastes, 26 lbs. *per* yard lineal.

495 feet run ½-inch warning pipe.

117 feet run ditto, extra bent, in services to urinals.

3081 feet run ¾-inch pipe in services.

910 feet 6 inches run 1-inch pipe.

372 feet run 1½-inch pipe in mains.

627 feet 8 inches run ditto in wastes.

30 feet run 2-inch pipe in services.

208 feet run ditto in wastes.

342 feet run 2½-inch pipe in wastes. One elbow to 2½-inch waste pipe.

71 feet 3 inches run 4-inch soldered socket pipe, made of 7-lb.

lead, to wastes, with strong soldered joints, fixed, complete. Two elbows extra.

1412 feet run 5-inch ditto, made of 8-lb. lead, and ditto, ditto, for soil pipes to water-closets. Fifty-one elbows extra to this.

43 bends and extra labour to 5-inch pipe, to pass over offsets from 2½ to 5 inches.

3 pieces of 5-inch socket pipe, fixed and soldered to D traps, safes, and soil pipes.

53 flanched joints, to connect lead and iron pipes, bolted.

Cocks fixed complete, all of the best quality, with screw bosses, lever handles, soldered joints to pipe.

46 ¾-inch, and three 1-inch bib cocks.

38 ¾-inch, eighteen 1-inch, and one 1½-inch stop cocks.

38 ¾-inch, and seventeen 1-inch cocks, with copper water-balls.

52 1½-inch, and thirteen 2-inch washers and wastes fixed to cisterns.

30 ¾-inch, and twenty-one 1-inch ferules and *fees* for laying on.

4 brass unions to slate cisterns for ¾-inch pipes, fixed, complete.

9 ditto, for 2-inch pipes.

4 ditto, for ditto, to pumps.

4 ends of 1-inch pipe casing over bolts, soldered to cistern sides.

46 four-inch brass grates and lead D traps fixed in sinks.

To execute, in addition to all the foregoing, and to what is shown and has been described, extra Plumber's work to be ordered by the Architect to the extent in value as follows :—

	£	s.	d.
In Royal Exchange Assurance offices . .	45	0	0
In London Assurance offices . . .	30	0	0
For the branch main in east area . .	25	0	0
In Lloyd's offices	150	0	0
In Banking-house	20	0	0
In water-closets and sinks for shops . .	45	0	0
In the Unappropriated offices . . .	20	0	0

Lay on water in four places, and *pay for the use of water* for all trades.

N.B. All prices and amounts given in this Specification of Plumber's work to be considered prime-cost prices and values.

To allow for ample and proper casing to protect all Plumber's work, and for the preservation of it from injury by the workmen and others, delivering up all water-closets, urinals, sinks, cisterns, and all appurtenances, in clean and perfect condition.

All the Plumber's work, when done, to be examined, and all works done beyond what is shown and described to be allowed as extra works, according to the conditions of the Contract; all works not done in extent and in quantity, and all deficiency of quality or value, as also all the sums of money, or parts of them, provided for extra works which the Architect shall not order to be done, shall be deemed deductions, and shall be valued according to the conditions of the Contract, and allowed by the Contractor as offsets against allowed claims for extra works as far as their amounts will permit; and if the valuation should exceed the value of such extra claims, the balance to be deducted from the last payment on account of the contract to be paid to the Contractor.

GLAZIER AND METAL WORKER.

Glaze all sash doors, sashes, fanlights, and skylights throughout, as shown in the other drawings, and described with the other works. All glass in the basement, and in the second story, not otherwise described, to be second crown glass. All other glass to be partly sheet glass of the best quality, commonly called patent flattened sheet glass, which is to weigh not less than 19 ounces the foot superficial; partly polished sheet glass of the best quality, commonly called patent plate glass; partly unground plate glass; partly plate glass ground on 1 side only; and partly polished plate glass, as is more particularly described in the other parts of the Specification. The glass used to sashes which are circular on the plan, to be properly bent to the required curves.

Provide and deliver to joiner, to be fixed by him, a patent 9-inch *glass illuminator.*

Provide and fix in iron frames 6 patent *glass illuminators,* 18 inches diameter.

Provide and fix all the copper and metal skylights and sashes described with the other trades. The copper bars to be solid drawn bars.

The openings for light in the great span roof, west end, to be glazed with unground *plate glass,* 42 sheets, 48 inches × 34 inches; 4 sheets, 55 inches × 34 inches; and 10 sheets, 48 inches × 18 inches. The joints to lap 2 inches, and the edges and meeting surface to be ground to form a close lap-joint.

Provide and fix extra metal work beyond what is shown and described, to the extent in value of 100*l.*; and also, in addition thereto, extra glazing beyond what is shown and described, to the extent in value of 100*l.*

PAINTER.

All woodwork to be knotted twice. Generally, all work to be properly prepared for painting. The materials used to be all of the first quality; the work carefully executed, properly stopped, and pumiced between each coat.

To paint all bolts, straps, and wrought-iron work used in the carpentry, and all cast-iron work not covered, with 3 coats of oil colour. The cast-iron beams, bearers for arches, and similar castings, which will be covered in, to be painted with lithic paint, as described with the smith's work.

To paint all railings, gratings, iron guards, and sashes, the iron staircases, the metal skylights, and all other ironwork and metal work, 4 times with oil colour. To paint in a similar manner the stone chimney-pieces.

To prime, and, in addition thereto, to paint 4 times in oil colours, all woodwork usually painted; to be finished fair with some plain tint, including all woodwork provided to be done to a given extent in quantity, but not that which is provided in extent in value. To paint 5 times in oil, and, in addition, once in flatting, with a plain colour, all stucco walls, together with all panel work, all mouldings, all mastic plinths, and the 24 decorated window and panel heads in Lloyd's room; also all other plaster work described and provided to be done to the sides of these rooms.

To paint 5 times in oil only the cemented sides in water-closets, urinals, and other parts adjoining.

To varnish twice, with the finest copal varnish, all the wainscot woodwork, so as to produce, when finished, a polished hard surface, including all handrails, and all sashes, frames, and beads.

To bronze the ornamental ironwork, and other work, to the extent of 2643 yards superficial; also balusters and bars, in addition thereto, to the extent of 17,451 feet lineal.

To *grain* extra, in imitation of wainscot or oak, and varnish twice, as described for the wainscot woodwork, sundry parts of the work which will be directed by the Architect, to the extent of 3000 yards superficial. Two-thirds in quantity of this work to be plain good graining; the remainder to be executed in the most perfect style.

Provision.—Execute other painting, more than is shown and described, to the extent in value of 100*l.*

Those parts of the work to be done for which specified quantities and values are given, are to be examined and measured, and the variation, as in the case of the other work, valued and allowed either way, according to the conditions of the Contract.

ADDENDA.

The Contractor to give notice to the *District Surveyor,* and pay him his fees of 42*l.* when the roofs are completed.

The Contractor, when he takes possession of the ground, is to pay the Yeoman of the Channel 19*l.* 6*s.*, and he is to pay also a similar fee in amount at the end of every 12 months afterwards, until the hoard is removed.

To reinstate, alter if needful, and maintain, the present hoard, until the completion of the works.

To provide and keep 1 gate-keeper and 1 watchman during the progress of the works, and also to provide and keep in repair a watchbox for them.

To execute works necessary for the finishing of the Porters' room in Ambulatory, beyond the door, which is before described, to the extent of 20*l.*

To cart away all superfluous earth and rubbish from time to time, during the progress, and at the completion of the works.

To make copies of all the Contract drawings and of the working drawings from time to time, for his own use, as the original drawings will remain with the Clerk of the Works.

N.B.—The dimensions for cisterns, expressed in the former parts of this Specification, are the dimensions inside of the cisterns, and not outside.

[Here followed the list of the Contract drawings, to which the foregoing Specification refers.]

Specification of Works proposed to be done in Erecting and Finishing a Building, to be called

THE UNIVERSITY HALL,

On the West Side of Gordon Square, London, in accordance with Drawings prepared for the purpose, Nos. 1 *to* 12, *and such other Explanatory Drawings as may be furnished during the progress of the Works.* THOMAS L. DONALDSON, *Architect. April,* 1848.

EXCAVATOR AND BRICKLAYER.

Digging.—Dig out the ground over the surface of the building to the depth shown by the drawings, also the trenches for the foundations, drains, &c. Clear and cart away all the superfluous earth and rubbish. Dig out the ground for the yard at the back of the building, level and make up the same so as to finish at a depth of one step below the basement-floor, and spread on the surface the gravel from the excavations.

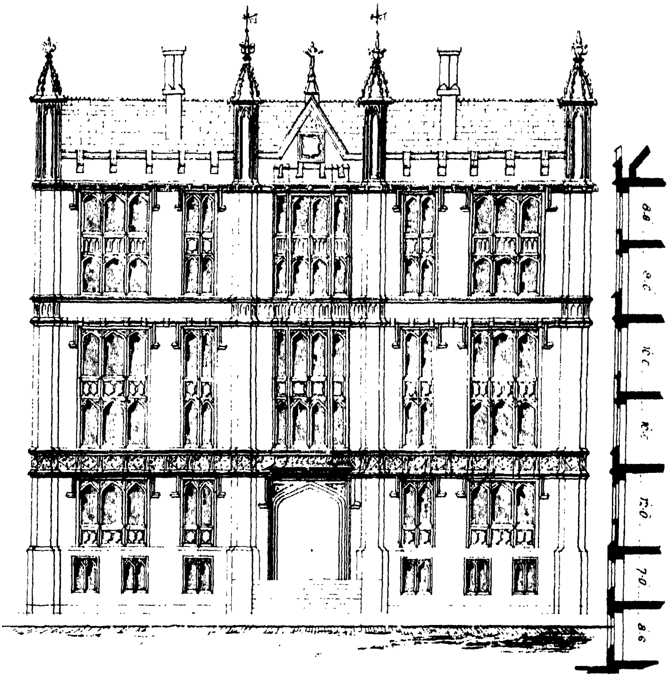
Concrete.—Put a concrete foundation under all the walls of the building, 2 feet deep and 12 inches wider than the lowest course of footings respectively. The concrete to be composed of clean Thames ballast and ground lime, in the proportions of 7 to 1.

Materials.—The *bricks* to be good, sound, hard, well-burnt stocks; the *mortar* to be composed of fresh-burnt stone-lime and Thames sand in proper proportions. The *cement* to be from Francis, or other approved manufacturer, and used with equal quantities of sand.

The *brickwork* to be carried up regularly, the joints well flushed up, the front wall to be laid in English bond. *Inverts* to be formed under the openings in the external walls of basement, when they can be obtained. Cut all rakes, splays, &c. required. Build all the walls, piers, chimney-breasts, &c., of the lengths, heights, and thicknesses shown by the drawings. Form *discharging arches* in mortar over all openings.

Arches.—Turn arch in cement over the area for the entrance steps, also arches in cement over the rooms and passage under Entrance-hall.

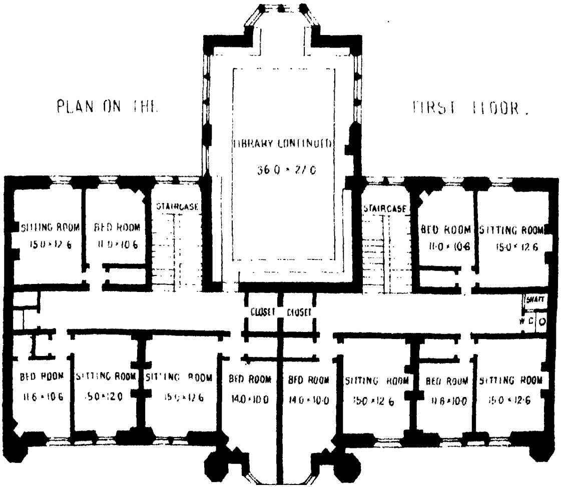
Turn half-brick *trimmers* in cement to all fire-places above the basement. Put wrought-iron *chimney-bars*, 2 inches × $\frac{5}{8}$ inch to the small openings in basement, 3 inches × $\frac{1}{2}$ inch to the opening in scullery, and cradle-bar to the kitchen fireplace.



SECTION.

UNIVERSITY HALL, LONDON.

PLAN ON THE FIRST FLOOR.



incent Brooks, lith.

Thos J. Donaldson, Archt
Bolton Gardens Russell Sq.

Provide and fix a ring for smoke-jack in kitchen chimney.

All the chimney openings above the basement to have cast-iron arris bars, with square bearing ends.

Build *bonding courses* in cement with *hoop-iron bond*, 1¼ inch × $\frac{1}{16}$ inch, pitched and sanded, in the following places, viz. :—

In each story, 3 courses in height in cement, with 8 lines of iron hooping in each of the 2 and 2½ brick walls, 6 lines in the 1½ brick walls, and 5 lines in the 1 brick walls. Also, in each story, in addition to the above, 2 courses in height in cement, with 5 lines of hoop-iron in the 2 and 2½ brick walls, 4 lines in the 1½ brick, and 4 in the 1 brick walls, the cement courses and iron-hooping to run through all the walls, both external and internal, so as to form a continuous bond. Where the walls are not covered with cement, the cement to the bonding courses is to be raked out and pointed with mortar.

Facing.—Face the front wall and the chimney shafts seen from the back, with picked red-facing bricks, of a uniform colour, and pointed with blue mortar, with rubbed splays to the reveals of openings; turn gauged arches over all doors and windows where there are not stone heads.

Form the necessary projections for string courses and label moulding. Form the patterns and the date of the building in rear front with black glazed headers: the general surface of picked stocks.

Chimney-tops.—Carefully construct all the flues, and core them at the finish. Carry up the chimney shafts as shown from the tailing courses and projections, and set in each a cement or earthenware top, with the angles rounded, properly set and flanched in cement.

The 4 upper courses, with the projections to chimney shafts, to be in cement.

Vaults.—Brick up the fronts of the present vaults and form openings for doors as shown, repair the brickwork of vaults, and twice lime-white the same. Cut 4 doorways through the division walls of vaults where shown, make good the jambs and arches over in cement.

Clear off the arches under the Entrance-hall after the removal of the centring, and twice lime-white the arches of these rooms, also the sides and the arch under the steps.

Pave the vaults and the cellars under Entrance-hall with hard stocks, flat in sand and grouted with mortar.

Sleeper walls.—Build walls for sleepers, and paving and fender walls to fireplaces in basement story.

Build the ½ brick walls enclosing the water-closets in the upper stories in cement, also such other parts as are shown or described to be in cement on the drawings.

Provide the necessary ironwork for, and set a copper in the scullery, the copper not to be included.

Bed and point all wood door and window frames, assist the mason in fixing the stone window frames, &c., and attend, cut away for, and make good after other workmen when and where required.

Air Gratings.—Provide and fix where directed 90 cast-iron air gratings, 9 inches × 3 inches.

Asphalte.—Lay over the surface of the walls throughout the basement story, above the footings, asphalte ½ inch thick, to keep down the damp.

Fence Walls at Back.—Build fence walls to enclose the ground on each side of yard 1 brick in thickness, with ½ brick piers 14 inches wide on face, 6 feet apart; finish the walls with brick on edge in cement.

Drains.—Lay in 9-inch tubular drains of *glazed earthenware* from the drain-water and soil pipes at back through the building, to communicate with the sewer in the front, with branches from the water-closets in vaults. Lay similar drains, but 6 inches diameter, from the sink and the rain-water pipes in front, also 50 feet of 6-inch drain from each side of yard to communicate with the 9-inch drain, with a branch of the rain-water pipe of bow at back. All these drains to be carefully laid to proper currents, and securely jointed and connected with pipes, &c.

Form where directed in yard 2 small cesspools, with kerbs and gratings over, and 5 trapped cesspools, 2 feet 3 inches square in clear, and 3 feet 6 inches deep, built with half brick in cement, and rendered all round in cement, with York dip stone and cover.

Provide and fix five 8-inch cast-iron bell traps, and 5 York sink stones.

Fees.—Give the proper notices and pay the *District Surveyor's fees*, and fees to Official Referees (if any).

Fence Wall in Front.—The ground is at present enclosed in front by a fence wall, which is the property of Mr. Thomas Cubitt, and the Contractor must arrange with Mr. Cubitt for the purchase or otherwise of the same. It is supposed this wall may serve the purposes of a hoard, but the Contractor must make any gates that may be required in the same.

Clerk of Works' Office.—Erect a temporary office for the Clerk of Works, with fireplace and stove, and desk with drawers, &c., complete.

Clear and cart away all superfluous rubbish during the progress of the works.

MASON.

Materials.—All the stone to be of the best quality of their respective kinds, free from all defects, and properly set, worked, and moulded according to the drawings.

The Mason to provide all moulds, also all plugs, dowels, cramps, &c., for properly securing his work, and all necessary casings to external stonework likely to be damaged, as well as to steps, &c., internally, and to clean off and leave the whole perfect at the finish.

The copings to front and back parapets, gables, embrasures, &c., the finial on front gable, the whole of the upper part of the turrets in front, the whole of the bay window in front, with the corbelling below the same, the entrance doorway, the sills, jambs, mullions, and heads to the front windows, with the shields and panels between the windows of upper stories, the jambs and heads to doorways in front area, the jambs, heads, mullions, and sills of the back windows, the splays to sets-off of turrets, the pedestals for area railing, the coping on courses at ends of area, and any other parts indicated by the elevations and sections, and by the detail drawings, to be executed in *Caen stone;* also the balustrades to the two staircases leading from the Entrance-hall to third story, the corbels under groins in Entrance-hall, and under brackets below girders over Council-room, Library, &c.

A separate amount to be stated in the Tender of the difference of executing the string courses in part with Caen stone instead of cement, as hereafter described.

Portland Stone.—Provide and fix kerb 9 inches × 9 inches for area railing in front, worked on top and sides, and chamfered on the edges, with spur stones for standards.

Portland step, 12 inches wide, in entrance doorway, rubbed on top and face. 4 Portland landings outside, with Portland steps up to same, the bottom step to be solid, the others to be spandril steps. Pave the Entrance-hall, as far as the steps leading down to Dining-hall, with 2-inch Portland paving, in courses on dry rubbish laid over the surface of the arches. The steps leading from the Entrance-hall up to the corridors of third story and the landings to be of Portland stone; the bottom steps to be solid, the others to be spandril steps; all to be rebated or joggled together, and the tops, faces, and soffits rubbed. The steps from upper to lower level of Hall to be similar to the above.

The staircases from mezzanine floor to third floor, and from third floor to Library floor, to have rubbed Portland spandril steps, as before described, and 6-inch Portland landings joggled together.

Yorkshire Stone.—Provide and fix 4-inch Yorkshire *stone landings* to carry the angle chimneys where there are no chimneys below. Yorkshire *stone templates* morticed for caulkings for the ends of all the iron girders throughout; also for ends of timbers where required. Rough *York paving* on iron bearers where they are intended to carry walls.

The 3 upper flights of each staircase to have 3-inch York steps and risers rubbed all round, the edges of steps chamfered, with 6-inch rubbed landings joggled; the bottom flight of each staircase to be similar to the last, but to be tooled only instead of rubbed. The landings forming floors of corridors on each story to be of 4-inch York, all to be rubbed on both sides, except that to the mezzanine floor, which is to be tooled only on the under side. The whole of these landings are to rest on the 9-inch walls the whole thickness, and to be joggled together and run with cement.

The *landings* forming quarter spaces of stairs in upper stories are to run on to form the floors of water-closet and sink closets, and to have holes cut for D traps and pipes.

The *sinks* in these closets to be 7-inch York, pinned into walls, with holes cut and rebated for bell-traps.

Pave the lower part of the Entrance-hall and under the steps leading up to third story with 2½-inch rubbed York paving.

Pave the parts coloured blue on the basement plan with 2½-inch tooled York; that within the building to be in brickwork, and in the areas on dry rubbish laid to a current with a channel grooved. 3-inch sills in all the internal doorways and doorways to vaults, morticed for frames.

Tooled solid steps in all the external doorways at front and back.

The *sink* in scullery to be of 8-inch tooled York, with rounded corner, and hole cut and rebated for trap.

All the steps, landings, &c., to be securely pinned into the walls. Cut all *holes for railing*—those to the steps and risers to be in the top, and those to the Portland solid steps to be in the end.

The steps down to area in front to be 3-inch broad York steps and risers, with solid step at bottom and winders, as shown.

Chimney-pieces.—Provide and fix to all the sitting and bedrooms throughout the upper stories and to Servants' hall, Portland flat gothic chimney-pieces as drawing, with rubbed York slabs and tooled back hearths. To the Council-room, Dining-hall, and

Library, large gothic moulded chimney-pieces, as drawing, with Portland slabs and York back hearths. To the servants' rooms in mezzanine and basement, plain Portland mantels and jambs, 6 inches wide, with shelves, and York slabs and back hearths; and to the Scullery and Kitchen 2-inch rubbed York mantels and jambs, the jambs 9 inches wide, the mantels 10 inches wide, haunched with key-stone in centre. All the chimney-pieces to be securely fixed with copper cramps.

SLATER.

Cover the roof with best *Bangor Duchess slates* properly lapped, cut close to hips, valleys, &c., with double courses at the eaves, and nailed with *copper nails.*

Cover the *ridges* with *black glazed tiles,* with ornamental cresting on top, set in cement, rebated together and secured by an iron rod.

Provide 300 feet superficial inch rubbed *slate shelves,* half 9 inches, and half 18 inches wide, to be fixed where directed, with the necessary brackets.

CARPENTER, JOINER, AND IRONMONGER.

Materials.—The timber to be all Memel, Riga, or Dantzic. The deals to be Christiana or others of equal quality, all, both timber and deals, to be sound, well seasoned, and free from knots, shakes, sap, and other defects.

Construct the *roofs* according to the drawings, with ridge 11 inches × 2 inches, chamfered on top for ridge tiles; rafters, 4 inches × 2¼ inches with trimmers and trimming rafters 4 inches × 3 inches; valleys, 11 inches × 3½ inches, purlins 8 inches × 4½ inches, pole plates 12 inches × 4 inches, struts to purlins 4 inches × 4 inches, plate against chimney stacks to receive rafters of front part 5 inches × 4 inches.

Cover the roof with inch battening for slating, with lear boards and tilting fillets. Inch deal *gutter and bearers* laid to proper currents with drips and cesspools. Similar gutters to the valleys.

Trim for and form the *dormer,* where shown, with head and posts, 4 inches × 4 inches, quarters and bearers, 4 inches × 2 inches. Inch boarding to top and sides, fir proper doorcase, with oak sill in front, with inch proper ledged door, hung with 12-inch cross garnets, with two 8-inch thick bolts. Chamfered fillet over door.

Binders for ceiling joists, 9 inches × 4 inches; ceiling joists, 4 inches × 2 inches; plate where required for ends of ceiling joists, 4 inches × 3 inches. Trim the ceiling joists for *trap-door*, fix inch rebated and staff-beaded linings, and provide one 1¼-inch 2-panel square trap-door, with two 6-inch thick bolts. Provide a strong *step ladder* with hooks and staples. *Provide* 1000 feet superficial inch rough boarding in roof, and 40 feet cube fir in additional sizes to ceiling joists to carry same.

Provide and fix 2-inch deal chamfered bar *skylights* overshafts, blocked up for *ventilation* with 1¼-inch deal wrought and tongued linings; fix quarters 4 inches × 2½ inches from skylights down to ceiling.

Joists to flats over bows 4 inches × 2½ inches, with plates 4 inches × 3 inches, and ceiling joists 3½ inches × 2 inches under; lay the flats with inch rough boarding firred to form currents; rolls for lead and inch gutter and bearers in the drifts and cesspools.

Partitions.—The centre partition between front rooms in sixth and seventh stories to have head and sill 4 inches × 4 inches; braces and struts 4 inches × 3 inches, posts, 6 inches × 4 inches; quarters 4 inches × 2 inches, wrought-iron straps to feet and heads, 1½ inch × ⅜ inch.

The common partitions throughout all the stories to have heads and sills 4 inches × 4 inches, posts 4 inches × 4 inches, door heads 4 inches × 3 inches, quarters and puncheons 4 inches × 2 inches.

The trussed partitions to have heads and sills 4 inches × 4 inches, interties 6 inches × 4 inches, queen posts 6 inches × 4 inches, crown pieces and braces 5 inches × 4 inches, door posts 4 inches × 4 inches, puncheon and quarters 4 inches × 2 inches, wrought-iron straps 1½ inch × ⅜ inch, and inch wrought-iron suspending bolts with heads and nuts.

Wood bricks for the doors and skirtings and where else required 4 inches × 2½ inches.

Lintels to external doors and windows of mezzanine and basement 9 inches × 4½ inches.

Floors.—Joists to 2 centre rooms in front on seventh story 9 inches × 2¼ inches, to front and back rooms each side of centre 10 inches × 2¼ inches, to back rooms in centre 8½ inches × 2¼ inches, trimmers and trimming joists in all cases ¾ inch thicker than the common joists, plates 5 inches × 4 inches. Where the plates come against walls with flues, they are to be carried by *iron corbels or shoes* pinned into the walls, weighing each 30lb. 1 tier of *herring-bone strutting* to each of the front and back rooms on each side of centre.

Joists for front and back rooms each side of centre in sixth story to be the same as described for the seventh story, with plates and herring-bone strutting.

Floors over Council-room to have bridging joists 6½ inches × 2¼ inches, trimmers 6½ inches × 3 inches, binders 12 inches × 4 inches, and ceiling joists 4 inches × 2 inches.

Bridging joists over library 6 inches × 2¼ inches. Binders 12 inches × 6 inches, and ceiling joists 3½ inches × 2 inches. Fir flitches bolted to iron girders 12 inches × 4 inches.

Ceiling joists over part of Council-room below stone landing 4 inches × 2 inches, with binders 4 inches × 2½ inches.

Joists to front and back rooms each side of centre, in fifth, fourth, third, and mezzanine stories with plates and herring-bone strutting as to sixth and seventh floors. Bridging joists to Council room 6½ inches × 2¼ inches, trimmers 6 inches × 3 inches, binders 11 inches × 6 inches, and against walls 11 inches × 4 inches, carried on iron corbels as before described. Ceiling joists 4 inches × 2 inches, bridging joists to Library floor 6 inches × 2¼ inches, with trimmers 6 inches × 3 inches, binders 12 inches × 6 inches and 12 inches × 4 inches, with corbels as before described, and ceiling joists 4 inches × 2 inches, bearers 12 inches × 6 inches.

Joists to Dining-hall 10 inches × 2½ inches, plates 5 inches × 4 inches, binders 12 inches × 5 inches, 2 tiers of herring-bone strutting to front part, and 1 to back part.

Joists for wood floors in basement 4 inches × 2½ inches, and sleepers 4 inches × 3 inches.

Cradling, &c.—Provide and fix cradling to iron bearers to receive linings, also all bracketing for mouldings, &c.

Centring.—Provide all centring and turning pieces to openings, centring and springing pieces to trimmers.

Ribs, &c., for Groined Ceiling.—Provide and fix ribs 6 inches × 2½ inches in 2 thicknesses, screwed together for groined ceiling of Entrance-hall, with bracketing for the soffits and mouldings.

Brackets and Casing to Iron Girders, &c.—Form the brackets under iron girders over Dining-hall and Library with deal, wrought and glued and screwed together in thicknesses, cut to shape, and hollow moulded on edge; form the perforated trefoil and cinquefoil panels in these brackets as shown. Case the iron girders with 1¼-inch deal sides, and 1½-inch deal soffits, hollow moulded on the angles, with moulding 12 inches girt on the soffit and 8 inches girt on the sides.

Case the bearers across bow in Dining-hall and Library with 1-inch deal on cradling, hollow moulded at the angles.

Floors.—Lay the floors of all the bedrooms and sitting-rooms on the upper stories, and rooms in the mezzanine (except Dining-hall) with 1-inch white deal straight joint.

Lay the floors of Council-room, Library, and Dining-hall with 1¼-inch yellow batten straight joint, and the kitchen and other rooms in basement, where not paved, with 1-inch deal straight joint. All the floors to have mitred borders to slabs, and all above the basement to be sound boarded for pugging.

Skirtings.—All the sitting and bedrooms in the 5 upper stories, and the rooms in mezzanine (except Dining-hall) to have 1-inch deal square skirting 6 inches high with grounds and fillets.

The Council-room to have inch narrow rebated grounds fixed with holdfasts, 1¼-inch rebated plinth 12 inches high, with backings and base moulding 3½ inches girt, 1¼-inch deal dado 1-panel high in narrow panels, hollow moulded, deal surbase moulding 9 inches girt. The Library to have 1¼-inch rebated plinth, hollow moulded on top, narrow grounds, fillet and bracketings.

The Dining-hall to have 1¼-inch dado, 2 panels high, hollow moulded in narrow panels, with surbase moulding 12 inches girt, ground and fillet. All the skirtings, dadoes, and mouldings to be tongued and mitred at angles, and housed into architraves, &c.

The skirting in basement to be 1 inch square 8½ inches high.

Doors.—The doors to all the sitting and bedrooms on the upper stories, and to the common rooms in the mezzanine, to be 1½-inch deal 6-panels square doors as drawing, hung with 3½-inch butts, and having 6-inch iron rim locks of the best description, 2½-inch deal frames or jamb linings, 4 inches × 2½ inches, framed, rebated, and grooved with hollow moulding worked on the edge; architrave moulding out of 2 inches × 1½ inch, moulded and back rebated. The doors opening on to the corridors to be 6-panelled, hollow moulded and square, with hinges, lock and doorcase as the last described.

The doors inside walls of Library to be 2-inch, 6 panel, moulded and square, with 3½-inch butts, seven 3-inch bolt mortice locks with ebony knobs, 2½-inch jambs as before described but 6 inches wide, and architrave moulding 7 feet.

The door from Council-room to corridor to be 2 inches, folding, moulded both sides with gothic heads, in 8 panels, hung with 3½-inch butts, having 7-inch rebated mortice locks as the last, also a set of sham furniture to each, 12 inches × 18 inches, brass flush bolts. Jambs 6 inches × 2½ inches, as the last described, with 1½-inch deal spandrils filled in over with moulded panels, the mouldings to be in Keen's cement. The doors between Council-room and Library to be as the last, but hung with 4-inch loose butts, the locks and furniture as the last described, 12 inches × 42 inches brass flush bolts, frame 6 feet × 3½ feet, moulded, grooved, rebated, &c., as before.

The doors to Dining-hall from Entrance-hall to be 2 inches, moulded both sides, folding in 8 panels; those from the Entrance-hall to corridors to be similar, but with the upper panels open for glass, with mouldings round; all to have 4-inch butts, mortice locks, rebated and sham furniture, and 12 inches × 18 inches brass flush bolts. Door-frames 6 feet × 3½ feet, as before.

1½-inch 6-panel square door to closet under stairs in Entrance-hall with 3½-inch butts, and 6-inch rim lock; 2½-inch jamb lining inch wide.

The doors to front entrance to be 2½-inch deal, moulded both sides as drawing, the upper panels open for glass, with mouldings round, the lower panels having moulding mitred in the centre to form them into 4 panels each; form the posts or buttresses dividing the doors with the moulded caps, plinths, and weatherings, also the triangular shafts over. The 3 crocketed pinnacles to these buttresses to be carved by Messrs. Taylor and Jordan's machinery, and to be calculated at 35*s.* each prime cost; the 16 cusped heads to the upper panels to be calculated at 7*s.* 6*d.* each, and the 16 lower ditto at 5*s.* each prime cost. Fir doorcase 4½ inches × 4½ inches, transom 4½ inches × 4 inches with moulding 7 inches girt inside, and 9 feet outside. 4-inch butts to the centre doors, and 4-inch loose butts to the side doors; three 12-inch, and three 24-inch brass flush bolts, a strong 10-inch drawback lock, brass mounted, and a large bronze knob. Octagon-headed ornamental nails to these doors, also to the doors from Entrance-hall to corridors.

The internal doors in basement to be 1½-inch 4-panel square with 3½-inch butts, 6-inch iron rim locks, 1½-inch double-rebated and double-beaded jambs; the wide doors to stove-place to be folding. 1½-inch framing, the lower part square framed, upper part sashed as side lights to kitchen-door, also between scullery and dairy.

The external doors at back to be 2-inch 4-panel moulded, and bead butt with 4-inch butts, 8-inch drawback locks and 9-inch barrel bolts, fir proper doorcases with transoms, 2-inch moulded fanlight over, with ¾-inch round wrought-iron guard bars, with flapped ends, screwed. The front entrance doors to be 2-inch deal, with pointed heads, lower part in 2 panels, moulded and bead flush, divided on the outside by moulding so as to form 4 panels, the upper part in 4 panels open for glass, 4-inch butts, 8-inch drawback lock, and 9-inch barrel bolts. 1¼-inch bead butt and square lifting shutters, with stubbs and plates, shutter lifts, and thumbscrew fastenings; fir proper doorcase with gothic head keyed.

Inch proper ledged doors under stairs with 14-inch cross garnets, Norfolk latches, and fir proper doorcases.

The doors in walls across area under steps to entrance to be 1½-inch deal, 4 panel, bead, butt, and moulded, the upper panels open for glass, with 3½-inch butts, 6-inch dead lock, and 9-inch barrel bolts; fir proper doorcases.

Inch proper ledged doors to vaults, those to water-closets to have a small sash inserted in each; all to have 18-inch cross garnets and Norfolk latches, 4 to have dead locks in addition, and the 2 to water-closets to have 6-inch barrel bolts. Fir proper doorcases.

Closets, framings, &c.—The closets in sixth and seventh floor to be 1½-inch, framed and beaded with square doors, having 3-inch butts and closet locks, chamfered and beaded stops. The lobby in Dining-hall to be formed with 2-inch moulded and square framing in narrow panels (2 in height), with 2-inch doors, moulded both sides in 8 panels, hung with Smith's patent swing hinges, and having 4 large brass splayed handles, the edges of the doors to be rounded, and the jambs hollowed to receive them. 1½-inch moulded and square framed top, with moulding 9 inches girt round as cornice.

The *lobbies* in Entrance-hall to be framed with 2-inch deal, moulded both sides framing, the upper part sashed with gothic heads to the lights as shown; the door to correspond, hung with 3½-inch butts, having 7-inch mortice lock, ¾-inch chamfered plinth and fascia, wrought and framed posts as buttresses, with weatherings, moulded cornice 21 inches girt, with notches to form embrasures; 1½-inch moulded and square top, and moulding inside 6 inches girt. Inch deal steps and risers from lobbies down to rooms adjoining, with inch skirting scribed. Inch double staff-beaded linings to openings between back bedrooms in centre part of seventh and sixth stories. 1½-inch ovolo fixed sashes in small bedrooms on these stories next staircases, in 1½-inch rebated and beaded linings, similar sashes and linings in shafts at ends of corridors on all the stories; each sash to have 2 copper casements with hinges and fastenings.

1½-inch ovolo fixed sashes in upper part of kitchen next corridor, in 1½-inch rebated and double-beaded linings.

Inch deal staff-beaded lining to window heads in mezzanine story, 1¼-inch bead, butt, and square *shutters* to 6 windows hung to wrought and splayed hanging style, 3 inches × 2½ inches, with

2½-inch butts and 2 back flaps, and having wrought-iron latch bars with mortices in hanging style. Similar shutters to the last to Steward's room in basement, and linings to window heads to all the windows.

1½-inch deal *shelves* to kitchen and scullery chimney-pieces, with rounded corners and cut cantilevers.

Water-Closets, &c.—Provide and fix over each sink and water-closet on the landings a 1½-inch deal *cistern*, dovetailed together on fir bearers 4 inches × 2½ inches, with plate 4½ feet × 3 feet; the cisterns to be the size of the closets, and 3 feet deep. The front and soffit to be enclosed by ¾-inch matched and beaded boarding, a small ¾-inch ledged door in wrought and rebated frame to be fixed in the wall between stairs and closet to get at the cisterns in each case.

The water-closets to be fitted up with best Honduras mahogany seat and riser, made to remove on deal dovetailed bearers. Hang the flap with 2½-inch brass butts, put moulded nosing on edge, form a paper box in each seat, and provide and fix a mahogany candle-shelf and ¾-inch mahogany skirting on seats. Put a 1-inch deal floor in the water-closets on bearers, with riser, and nosing in doorway; inch-square skirting 6 inches high. Attend Plumbers to water-closets and sinks, and case all the pipes. The doors to water-closets and sink-closets to be 1½-inch 4-panel square, with 3-inch butts, 6-inch dead locks, each of those to the water-closets having 8 keys to pass; 6-inch barrel bolts, 2½-inch jamb linings, as described for room-doors 4 inches wide.

Enclose the space in third story from landing, carrying water-closet down to floor with 1¼-inch square framed and beaded porch and doors, with 3-inch butts and closet locks.

Provide and fix in the kitchen a *cistern* of 1½-inch deal, 5 feet 6 inches × 3 feet 6 inches and 4 feet 6 inches deep, all in clear, wrought, ploughed, and tongued and beaded, supported by firm wrought and framed uprights and bearers 3 inches × 3 inches. Provide and fix in vaults two 1½-inch deal *cisterns* 4 feet × 3 feet, and 3 feet deep, on wrought and framed bearers. The *water-closets* in vaults to have inch-deal seats, risers, and bearers, with holes cut, 1¼-inch deal clamped flush and beaded frame, with rounded nosing, 2½-inch brass butts.

Provide and fix a 1½-inch *dresser* in kitchen, with pot board and bearers under, drawers with brass lifting handles, framed legs, rails, and bearers; inch shelves and standards over dresser.

Make all necessary provision for Bell-hangers and Gas-fitters, &c., and alter, cut away, and make good after other workmen, when and where required; provide all linings, fillets, bearers, blockings, and everything necessary to complete this branch of the works.

Provide 500 feet superficial of inch deal shelves with brackets and bearers, to be used where directed.

Form *air chambers* under the floors in each room to communicate with the fireplace.

Provide 10 *ventilators* on roof, value 10*s.* each, to be framed and fixed as may be hereafter directed.

Wainscot moulded *handrail* to the staircases from basement to top, grooved and fitted to iron case, with all necessary ramps, wreaths, &c.

SMITH AND FOUNDER.

Chimney Bars, Air Gratings, Strap Ties, &c.—Provide all the wrought-iron *chimney bars* and cast-iron arris bars described in the Bricklayer, the *air gratings,* &c.; also the straps, bolts, ties, guard bars, &c., described in the Carpenter's work.

Provide for carrying the arches over the inside of the large windows in Dining-hall and Library, wrought-iron bars 2½ inches × ½ inch. Provide the cast-iron shoes or corbels described in Carpenter's work.

Provide and fix the following *cast-iron girders,* &c., of the best soft grey metal from some approved foundry, the whole to be proved to the satisfaction of the Architect, and painted twice before leaving the foundry—viz.: 1 double iron girder, 1 foot deep, 1 inch thick, with top and bottom flanges bolted together to carry parapet over bow in front, and a similar girder to carry brace over bow at back. A girder across each staircase on every floor, 1 inch thick and 9 inches deep, with wide top flange to carry landings of staircases and corridors.

4 large girders, 1½ inch thick and 18 inches deep, with top and bottom flanges, to carry floors of Library and the floor over, with shoes for binders. A similar girder to the last, but 1¾ inch thick, over Entrance-hall, to carry floor of Council-room; and 2 large arched girders, with spandril ends, with trefoil and cinquefoil panels to carry floor over Council-room.

Large double bearer, 12 inches deep, bolted together, to carry bow in front.

Wrought-iron railing to staircases from basement to top, with inch *octagon balusters,* 1¼-inch hand and top rails to receive wood handrails; the balusters to the 2 flights of solid steps to be let into the ends of steps, the rest to be fixed into the treads of the steps. All to be securely run with lead, and the rail wreathed, ramped, &c., as may be necessary.

Put wrought-iron handrails, 1½ inch × ⅜ inch round balusters, and 1¼-inch round newel to area steps.

¾-inch wrought-iron round *guard bars to windows* of scullery, dairy, still room, and windows under hall, kitchen windows, lower window of staircase, and windows in projecting part at back, with cross rails where requisite, 1¼ inch × ½ inch.

Saddle bars to lead lights of wrought-iron, ¾ inch × ⅜ inch, let into stone jambs and mullions.

Iron railing to area in front according to Elevation, with standards and braces complete, securely fixed and run with lead, with a gate in same with hinges and fastenings complete. Provide 2 scrapers, value 7*s.* 6*d.* each, and 1 value 5*s.*

PLUMBER.

General.—To provide all lead, labour, solder, coals, wall hooks, nails, and every requisite for the performance of the Plumber's work in the best and most workmanlike manner.

Gutters, &c.—Lay the gutters and valleys with 6-lb. milled lead, turned up 6 inches against walls, and 9 inches under slates, properly dressed over drips and rolls. Form *cesspools* where shown, properly soldered with socket pipes into rain-water heads and hand gratings. Put 5-lb. *flashings*, 6 inches wide, to gutters, and step flashings to chimney-shafts and gables. 6-lb. lead top to dormer, secured by soldered dots, and 5-lb. lead to sides.

6-lb. gutters against chimney shafts by side of skylights, 5-lb. aprons and flashings dressed over the wood linings, and 5-lb. to ridge of skylights. The flashings to be all pointed with cement.

Rain-water Pipes.—Provide and fix 4 stacks of 4-inch cast-iron rain-water pipes from main roof down to drains, except 6 lengths of each of the two back stacks, which are to be lead, to receive the branch soil pipes from water-closets, 2 stacks of 2½-inch pipe from bows in front and back, all to have gothic moulded heads and shoes. Lay the *flats* of front and back bows with 6-lb. lead, as before described, with cesspools and socket pipes, 5-lb. flashing.

Cisterns.—Line all the cisterns with 8-lb. lead bottoms and 6-lb. sides, properly soldered. Each to have 1½-inch standing and under waste pipes, and 1½-inch brass washers and wastes; the wastes of the upper cisterns to lead into the sinks on the D traps of the closets.

Supply the upper cisterns by 1½-inch rising mains from the main in street, with inch pipe branched on to each cistern, and inch ball-cocks, balls and bosses.

Supply the cistern in kitchen by 1½-inch branch pipe, with 1½-inch ball-cock, ball and boss. Lay on the water to the cisterns in vaults from the main in street with inch-pipes, inch ball-cocks, balls, and bosses complete. Provide ferules in main for the services.

Put ¾-inch service pipes to the sinks in upper stories, and ¾-inch brass bib cocks and bosses, brass grates and ball traps, and 2-inch waste pipes leading into soil pipes.

The *water-closets* to have best pan apparatus with service boxes, D traps, air pipes, &c. complete; ¾-inch services to basins from cisterns over, 4-inch soil pipes, branched into the upright soil pipe before described. A ¾-inch pipe to be laid on to each set of rooms in every story from the cisterns over water-closets and sinks, with ¾-inch bib cock and boss to each. Lay on (say) 25 feet of ½-inch pipe from cistern in kitchen to supply cistern of range with ½-inch ball-cock, ball and boss, the cistern not to be included. ¾-inch service to sink in scullery, with ¾-inch bib cock and boss, brass-grate and bell trap, and 2-inch waste pipe into drain. ¾-inch service to water-closets in vaults, common servants' apparatus, with valves, pulls, and chains, and D traps with branch soil pipes into drains. Lay on the water, if required, for the use of the Bricklayers.

All the pipes when not cased to be bound round with felt.

Open the ground, *pay all fees* to turncock, &c., and make good the ground afterwards.

PLASTERER.

Externally.—Form all the mouldings to strings, &c. with the bosses or heads. The panelled enrichments under the windows of fourth floor throughout the length of the front and under the upper windows to the bow to be cast and fixed securely, and carefully trimmed and cleaned off.

Internally.—Pug all the floors throughout above the basement with lime and hair. Lath, plaster, flote, and set the ceilings and partitions in all the bed-rooms and sitting-rooms in the upper stories; also the servants' rooms in mezzanine and the basement story; render, flote, and set all the walls. Lath, plaster, flote, and set the ceilings in Library and Council-room, and the Dining-hall; form the groined ceiling in Entrance-hall in plaster, with mouldings, groining, ribs, and bosses at intersections. Render, flote, and finish with trowelled stucco the walls in Library, Council-room, Dining-hall, Entrance-hall, staircases from basement to top, and corridors on each story.

Form splays with arris to the doors of bed and sitting rooms in the different stories and the rooms in mezzanine, as shown by the detail drawings, also to the doors in corridors and Keen's cement mouldings. Form the splayed reveals inside to windows also in Keen's cement, with arris throughout all the stories, the window backs to be floted, rendered, set. Keen's cement mouldings as architraves to the doors in the principal rooms; all the architraves to have splayed plinths.

Keen's cement angles to chimney breasts, and projections in all the stories.

Run Roman cement skirting, 6 inches high, in all the corridors, on the staircases, and the Entrance-hall; also in the basement story where paved with stone.

Twice limewhite the cellars under Entrance-hall; also the vaults in front.

No whiting or coloring to be included in this Contract. No plastering to be done in rooms under Dining-hall.

Provide all scaffolding, rules, moulds, &c., necessary for completing the plastering.

Materials.—The *lime and hair* to be composed of good *chalk lime* and *Thames sand*, and a sufficiency of hair, and to be made up some time previous to being used.

Cut all quirks to wood beads, &c., and make good after Masons, Plumbers, Gas-fitters, and other workmen, when and where required.

Zinc Sashes, &c.—The front and back windows, except those to the Library and Dining-hall, to have zinc sashes, according to the drawings; those in the front to be made of bars similar to those numbered 17 on Messrs. Garner's List (of Queen-street, Cheapside), and those in the back to be of the bar numbered 5 in the same list, the whole to be securely fixed to the stone jambs and mullions by screws plugged into the stone with lead.

Casements to all the windows, some being zinc and the remainder iron, as more particularly described on the drawings, the whole to have frames, hinges, and fastenings complete.

The water-closets to have small iron frames, with lights hung on centres, with fastenings complete.

GLAZIER.

Glaze all the zinc sashes to front and back windows with second crown glass. Glaze the sashes between back rooms and staircases on sixth and seventh stories, and all the sashes in the shafts with ground glass; also the sashes between kitchen and corridors on mezzanine floor.

Glaze the upper panels of doors from Entrance-hall to corridors with British plate glass, each in 1 length; also the upper part of lobbies in hall, and the upper panels of entrance doors, and fixed head over.

Glaze the skylights on roof with the best and stoutest sheet glass, also the upper panels of front doors in basement. The external sashes in basement and the fanlights over back doors to be glazed with seconds glass.

The windows in Library and Dining-hall to have seconds glass in quarries, in strong lead lights, properly cemented and secured to saddle bars by copper bands.

Iron casements with hinges and fastenings to be fixed in these windows, as shown by drawings.

All the glass throughout to be properly puttied and back puttied, and all to be left clean and whole at the completion of the works.

PAINTER.

Paint all the wood and iron-work in the mezzanine floor except the Entrance-hall and Dining-hall, and all the work in the basement story 4 times in oil; paint the iron railing to staircase also 4 times in oil and any other internal iron-work in sight. All the rest of the internal woodwork to be *stained* in imitation of darkish oak, and varnished.

Paint the whole of the *external wood and iron-work* to back and front of building 4 times in oil, including the iron casements with sides; the principal entrance doors to be painted on both sides and grained oak and twice varnished.

All the woodwork, where necessary, to be properly rubbed down, knotted, and prepared.

BELLHANGER.

The work to be all done in the best and most workmanlike manner, with concealed tubes, &c., complete.

The bells all to have levers and numbers, or a box with indicators. The pulls to be all brass lever pulls.

Provide and hang for the seventh floor 6 bells and 20 pulls.
„ „ sixth floor 6 bells and 20 pulls.
„ „ fifth floor 4 bells and 10 pulls.

Provide and hang for the Library or fourth floor 6 bells and 12 pulls.
" „ third floor 4 bells and 10 pulls.
" „ entrance floor 8 bells and 8 pulls.
" „ basement floor 3 bells and 3 pulls.

All the bells to go down to the mezzanine, into the Servants'-hall, except four, which may go to the kitchen or some other special part.

Provide and fix bell-boards where required.

GAS-FITTER.

Provide and fix the following gas fittings, with all pipes, joints, stop-cocks, &c., necessary to make the whole complete.

In basement story, 8 bat's-wing burners.

In mezzanine or entrance floor, 6 bat's-wing burners and 2 gaseliers with 8 burners in each, sliding up and down, value 10 guineas each.

1 burner and lamp to slide up and down for hall, value 7 guineas bronzed.

Third floor, 6 bat's-wing burners.

Library, or fourth floor, 6 bat's-wing burners. 2 gaseliers as before described, with 8 lights, and 1 ditto with 6 lights.

Floor over Library, or fifth floor, 6 bat's-wing burners.

Sixth floor, 12 bat's-wing burners.

Seventh floor, 12 bat's-wing burners.

N.B.—32 of these bat's-wings are to be mere tubes brought up under the floor in the middle of each sitting room, prepared for an elastic tube, but *no tube* nor *burner attached.*

14 of the bat's-wings will be on the staircases with brackets ready for use. The rest of the bat's-wings are in the kitchen and offices and are to be attached to the chimney breasts, &c., with brackets ready for use.

PROVISIONS.

Provide in the estimate for the following works in addition to what is hereinbefore described, the whole or part to be deducted if not required.

2 rods reduced brickwork in mortar. 1 ditto in cement.

1 ton of hoop iron bond $1\frac{1}{2}$ inch × $1\frac{1}{16}$ pitched and sanded and laid in walls.

100 feet cube fir framed.

20 cwt. cast-iron in bearers, including patterns and fixing.

5 cwt. wrought-iron in strap screw-bolts, &c., including fixing.

The difference to be stated in the tender, if the string courses in front be executed in Caen stone instead of Portland cement, as hereinbefore described.

Contracts, Specifications, and Correspondence connected with the Erection of certain Portions of the

NEW HOUSES OF PARLIAMENT,*

UP TO THE YEAR 1847.

CHARLES BARRY, *Architect.*

THIS Indenture, made the 15th day of July, 1843, between Thomas Grissell and Samuel Morton Peto, both of Lambeth, in the county of Surrey, builders and co-partners, of the one part, and the Right Honourable Henry Pelham Clinton, commonly called the Earl of Lincoln, Alexander Milne, Esquire, and the Honourable Charles Alexander Gore, Commissioners of Her Majesty's Woods, Forests, Land Revenues, Works, and Buildings, for and on behalf of the Queen's Most Excellent Majesty, of the other part : Whereas the said Henry Pelham Earl of Lincoln, Alexander Milne, and Charles Alexander Gore, as such Commissioners as aforesaid, some time since received authority from the Lords Commissioners of Her Majesty's Treasury, to contract with the said Thomas Grissell and Samuel Morton Peto, for erecting and completing the several further portions of the intended new Houses of Parliament about to be erected and built upon the site of the old Houses of Parliament, and certain ground belonging to the Crown adjoining thereto, in or near Palace-yard and Abingdon-street, in the city of Westminster, hereinafter mentioned, videlicet, the carcase of a portion of the Victoria tower, to the height of 83 feet, the completion of the south front including the Guard-room and the Queen's Robing-room, the Royal staircase, the Royal gallery, the House of Lords, and its adjoining lobbies and corridors, the Peers' Refreshment-rooms, and a part of their offices and Officers' rooms, a portion of the Central tower, to the height of 86 feet; the House of Commons, with its lobbies and connecting corridors, its Refreshment-rooms, and also a portion of the Clock tower, to the height of 85 feet, as the same are more particularly shown by the block plan hereunto annexed, and thereon coloured red.

And whereas, on the treaty for the said Contract, it was ex-

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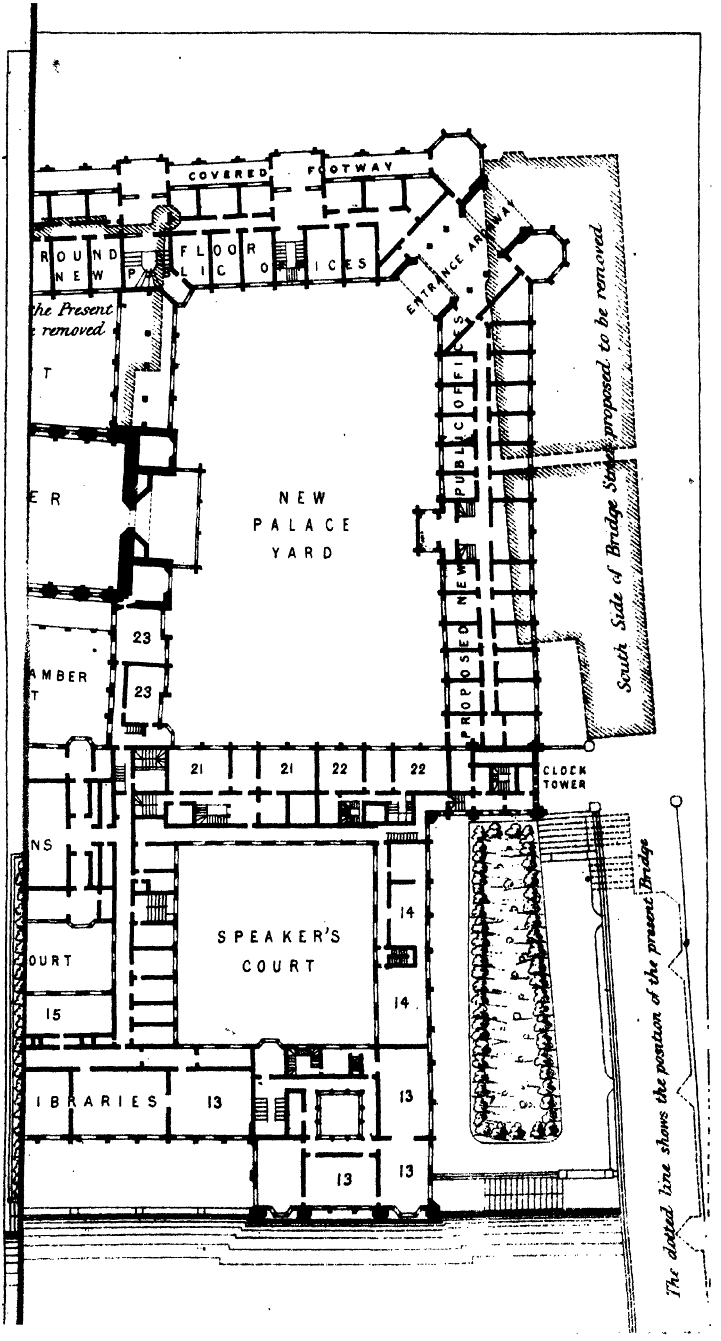
* The documents connected with a public work of this extensive nature are most important. It has therefore been considered desirable to depart from the order hitherto followed, and to introduce the correspondence, &c., which connects the several documents, and thus convey an idea of the official routine pursued in a Government work of this importance.—T. L. D.


COVERED FOOTWAY
ROUND FLOOR
NEW P LIC OFFICES
the Present
removed
ENTRANCE ARCHWAY
PUBLIC OFFICES
PROPOSED NEW
NEW PALACE YARD
T
ER
AMBER
T
23
23
21
21
22
22
CLOCK TOWER
NS
SPEAKER'S COURT
OURT
14
14
15
IBRARIES
13
13
13
13
South Side of Bridge Street proposed to be removed
The dotted line shows the position of the present Bridge

pressly stipulated, that if the said Thomas Grissell and Samuel Morton Peto should by any reason whatever, as after mentioned, not complete the said works within the period and manner hereinafter mentioned, they the said Thomas Grissell and Samuel Morton Peto should pay to Her Majesty, her heirs and successors, the sums of money hereinafter specified, as and for liquidated damages in respect of the delay, damage, and inconvenience, which would arise in respect of any failure to execute the said works.

Now, therefore, this Indenture witnesseth, that, for the considerations mentioned and set forth in the schedule of prices hereunder written or hereto annexed, and for other the payments after mentioned, and hereby agreed to be paid in manner hereinafter mentioned, the said Thomas Grissell and Samuel Morton Peto do hereby, for themselves, their heirs, executors, and administrators, and each of them, doth hereby, for himself and his heirs, executors, and administrators, covenant, promise, and agree to, and with the Queen's Most Excellent Majesty, her heirs and successors, in manner following :—

That is to say, that they, the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, shall and will forthwith proceed to do, perform, and execute, all the Masons', Bricklayers', Slaters', Carpenters', Founders', Smiths', Plumbers', Painters', Plasterers', and other work requisite and necessary to be done and performed in and about the erecting the carcase of a portion of the Victoria tower aforesaid, to the height of 83 feet, the completion of the south front including the aforesaid Guard-room and the Queen's Robing-room, the Royal staircase, the Royal gallery, the House of Lords, and its adjoining lobbies and corridors, the Peers' Refreshment-rooms, and a part of their offices and Officers' rooms; a portion of the Central tower, to the height of 86 feet; the House of Commons, with its lobbies and connecting corridors, its Refreshment-rooms, and also a portion of the Clock tower, to the height of 85 feet, agreeably to such plans, elevations, sections, drawings, and designs, as shall from time to time be prepared and signed by Charles Barry, or other the Architect for the time being, of the Commissioners for the time being of Her Majesty's Woods, Forests, Land Revenues, Works, and Buildings, and furnished by him from time to time so signed to the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, and also according to the Specification hereunder written or hereunto annexed, and such general instructions and working or detailed drawings as shall or may from time to time, during the progress of the works, be provided by the said Charles Barry, or other the Architect for the time being aforesaid, and the true intent and meaning of these presents.

And no alteration or deviation shall be made by the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, from the said plans, elevations, sections, drawings, and designs, or in the said specification, without the consent and approbation of the said Commissioners for the time being, or their Architect for the time being as aforesaid, in writing, under their or his hands or hand for that purpose first had and obtained.

And also, that they the said Thomas Grissell and Samuel Morton Peto, and the survivor of them, his executors or administrators, shall from time to time set out, or cause to be set out, the whole of the works hereby contracted for; and if at any time, during the progress of such buildings and works, any errors shall appear or arise therein, from negligence or otherwise, the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, shall, on being required so to do by the Architect for the time being of the said Commissioners aforesaid for the time being, remove and amend the works to the satisfaction of such Architect for the time being as aforesaid.

And also that they the said Thomas Grissell and Samuel Morton Peto, and the survivor of them, his executors or administrators, shall and will, at their or his own proper cost and charges, find, furnish, and provide all the stone, iron, timber, bricks, slates, lime, gravel, sand, lead, and other materials of every kind and description whatsoever, requisite or necessary for the doing and performing the said works hereby agreed to be done and performed, according to the true intent and meaning of the plans, elevations, sections, drawings and designs from time to time to be furnished by the said Charles Barry, or other the Architect for the time being of the said Commissioners for the time being as aforesaid, and the specification hereunder written or hereto annexed, and these presents.

And also, that they the said Thomas Grissell and Samuel Morton Peto, and the survivor of them, his executors and administrators, shall and will, at their own proper cost and charges, find, furnish, and provide all the engines, machinery, scaffolding, ladders, ropes, tools, tackle, implements, and utensils of every kind, quality and description whatsoever; and also all the labour, workmanship, freight, carriage, wages, and lodgings for workmen, sheds, coverings, matters and requisites whatsoever, that shall or may be requisite or necessary for the constructing, performing and finishing the said works hereby agreed to be done in the manner aforesaid, and according to the true intent and meaning of these presents;

And also shall and will, at their like cost and charges, find and provide all temporary works, that shall be from time to time considered necessary, and be required by the Architect for the time being of the said Commissioners for the time being for the purpose of preventing damage and accident, and for the proper execution of the works with due expedition; and if any part of the works shall sustain any injury during their progress, the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, shall and will, at their or his own costs and charges, repair and make good the same, so that the entire building may in every part be in a complete and perfect state on the completion of the works comprised in this Contract;

And also that the said Thomas Grissell and Samuel Morton Peto, and the survivor of them, his executors or administrators, shall and will, at their or his own costs and charges, during the progress of the works hereby contracted for, provide and keep for each department or trade of the said work a competent foreman to superintend the same, and to remain constantly during the hours of work upon the said premises, and also, if required, two gate-keepers and two watchmen, who shall remain on the said premises at all times during the progress of the said works, for the protection, preservation, and convenience of the whole of the said works, and of the materials and all other things upon the site of the said buildings;

And if the said Charles Barry, or such other Architect for the time being as aforesaid, shall at any time consider any of the said foremen, gate-keepers or watchmen as in anywise incompetent, or as acting improperly, and shall desire their removal from the said works, the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, shall and will immediately remove such foreman, gate-keepers or watchmen, and appoint others in the place or stead of those dismissed;

And in case of any neglect or refusal on the part of the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, so to do, it shall be lawful for the said Charles Barry, or such other Architect for the time being as aforesaid, to supersede such foreman, gate-keepers or watchmen, and put others in their places, at such weekly wages or payments as the said Charles Barry, or such other Architect for the time being as aforesaid, shall think proper, which wages or payments shall be paid and deducted out of the moneys, which may from time to time be due to the said Thomas Grissell and Samuel Morton Peto, their executors or administrators, by virtue of these presents;

And also that they the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, shall not, unless with the consent of the said Commissioners, parties hereto, or the Commissioners for the time being of Her Majesty's Woods, Forests, Land Revenues, Works, and Buildings, make any sub-contract or sub-contracts for the execution of the works hereby contracted for, or any of them, or any part thereof, nor, unless with such consent as aforesaid, assign over or underlet this contract:

And the said Thomas Grissell and Samuel Morton Peto do hereby declare and agree, that the whole of the said works shall be done under the direction and to the entire satisfaction of the said Charles Barry, or, in case of his decease, incapacity, or removal, then of such other Architect as shall or may be appointed for that purpose by the said Commissioners, or the Commissioners for the time being of Her Majesty's Woods, Forests, Land Revenues, Works, and Buildings, in all respects according to the intent and meaning of the Specification hereunder written or hereto annexed, and of such plans, drawings, and elevations as aforesaid:

And further, that the provisions and stipulations contained in any part of the said Specification shall be taken to form part of these presents, and that these presents shall be construed in all respects as if such provisions and stipulations were herein inserted:

And further, that the said buildings and works hereby agreed to be erected and built, shall be built, erected, performed, and completed in the best and most workmanlike manner, and also in the most solid, complete, durable, and substantial mode, that the nature of the materials to be used in and about the same, according to the Specification hereunder written, will admit of, under the direction and to the entire satisfaction of the said Charles Barry, or such other Architect as aforesaid, whose judgment and decision upon such matters shall be binding and conclusive upon the said Thomas Grissell and Samuel Morton Peto, their executors and administrators;

And that the said plans, elevations, sections, drawings, and designs hereinbefore referred to, and the written explanations or directions upon them, or any of them, shall be equally binding upon the said Thomas Grissell and Samuel Morton Peto, their executors and administrators, and be pursued in the building, performing and completing the said works hereby agreed upon, in the same manner as if the same respectively were attached to or contained in these presents;

And further, that if anything, either by way of drawing or otherwise, which may appear upon the said plans, elevations, sections, drawings, or designs, so to be furnished as aforesaid, is omitted in these presents, or in the Specification hereunder written or hereunto annexed, and which may be considered necessary to complete the intended work according to the intention of the Architect of the said Commissioners for the time being, or in case any work is mentioned in the Specification, which may not be shown in the said plans, elevations, sections, drawings, or designs, the same shall not be taken to have been intended to have been so omitted, but shall be considered to form a part of and fall within this present undertaking, and be followed and performed by the said Thomas Grissell and Samuel Morton Peto, and the survivor of them, their and his executors or administrators accordingly;

And that in all cases where the descriptions of or upon the said plans, elevations, sections, drawings, and designs, shall be more full and explicit than the said plans, elevations, sections, drawings, and designs, the said descriptions shall be attended to, as illustrating the intention of the aforesaid Architect;

And the said Thomas Grissell and Samuel Morton Peto, and the survivor of them, their and his executors and administrators, shall be bound and do hereby undertake to execute the said works hereby agreed upon according to the said descriptions, it being understood and agreed by and between the said parties hereto, that the said plans, elevations, sections, drawings, and designs, and the descriptions thereof or thereupon respectively, shall be mutually held to explain one another; and the said works hereby agreed upon shall be built, performed, and completed according to the true intent and meaning of the same respectively considered together;

And further, that in all such cases (if any) in which there shall be any disagreement or difference between the said plans, elevations, sections, drawings, and designs, and the descriptions upon them respectively, and the Specification hereunder written or hereunto annexed, the said Thomas Grissell and Samuel Morton Peto, and the survivor of them, their and his executors and administrators, shall adopt and pursue that mode of execution, which the said Charles Barry, or such other Architect for the time being to be appointed as aforesaid, shall consider to be most favourable or conducive to the strength, solidity, and durability of the said works;

And further, that dimensions, which may be figured on the said drawings, shall be considered as correct, in preference to any dimensions, that may be obtained by an application of the scale; and if any difference or discrepancy shall appear between the said drawings, all those, which are to the largest scale, shall be adhered to in preference to those, which are upon a smaller scale, if the Architect aforesaid shall so direct;

And further, that if the said Commissioners, parties hereto, or the Commissioners for the time being of Her Majesty's Woods, Forests, Land Revenues, Works, and Buildings, or the Lords Commissioners of Her Majesty's Treasury for the time being, or the said Charles Barry, or other the Architect for the time being as aforesaid, with their sanction, shall be minded and desirous of making any alterations or omissions in or additions to the said plans, elevations, sections, drawings, and the Specification or other descriptions hereinbefore mentioned, or any of them, or in the mode or manner in which the said works hereby contracted for are covenanted to be completed as aforesaid, or in the stone or other materials to be used in or about the same, and shall in consequence of such their or his mind or desire, give an order or notice in writing, or such explanatory drawings as may be necessary and sufficient to the said Thomas Grissell and Samuel Morton Peto, their executors or administrators, signed by the said Charles Barry, or such other Architect for the time being as aforesaid, therein particularly and minutely mentioning, describing, showing, and setting forth the nature and mode of such proposed or wished-for alteration, addition, or omission, then and in every such case no such alteration, addition, or omission shall vitiate or invalidate this present Contract; but the said Thomas Grissell and Samuel Morton Peto, and the survivor of them, their and his executors and administrators, shall and will, upon receiving such notice or order, or such explanatory drawings as aforesaid, obey, abide by, perform, and observe the directions and contents of every such order or notice, or such explanatory drawings, and build, erect, construct, perform, and complete the said works according to the altered manner therein directed and specified, and as if such alterations or variations had been included in these presents, and the said drawings, plans, and specifications:

And further, that the prices of the works to be performed under this Contract shall be ascertained and settled by the said Charles Barry, or such other Architect for the time being as aforesaid, by admeasurement and valuation, in all respects according to the prices stated in the Schedule of Prices hereunder written, or hereto annexed, which prices it is hereby expressly understood and agreed include and cover the cost of coring the flues; the security, maintenance, and preservation of the coffer-dam, and all matters and things appertaining thereto; the raising and carting away all superfluous rubbish; the making, maintaining, and removing of the scaffolding, tackle, and implements of every description; casings for masonry; all costs and expenses of gate-keepers, moulds, rules, rods, and all other costs, charges, and expenses connected with, incident to, or contingent upon, the due performance of the works hereby contracted for; or if none of the prices in the said Schedule shall apply, then and in such case the prices of such works, as may not be provided for by and specified in the Schedule hereto annexed, shall be finally settled and determined by an allowance of a price or prices in respect thereof in proportion to or corresponding as nearly as may be with the prices mentioned in the Schedule hereto annexed for works of the like nature, or having the nearest reference thereto;

And further, that a weekly account in writing of all day-works done and performed in execution of this Contract shall be delivered by the said Thomas Grissell and Samuel Morton Peto, their executors or administrators, to the Architect of the said Commissioners for the time being, or his Clerk of the Works for the time being, sometime before the expiration of the week next following that in which such work shall have been performed, such delivery to be testified by the receipt in writing of the said Architect, or his Clerk of the Works, and in case such weekly account in writing shall not be delivered within the time before mentioned, the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, shall not be entitled to any claim for any work in respect of which such weekly account shall have been neglected or omitted to have been delivered as aforesaid;

And further, that, in order to ascertain the extent and nature of all works done in performance of this Contract, the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, or their or his managing Clerk or other person to be appointed by them or him, and the said Charles Barry, or other the Architect aforesaid, or a Surveyor or other competent person to be from time to time appointed by him, shall attend on the premises on Wednesday in every week during the time the said works shall be carried on, and shall take an account of all works done and performed by the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, in execution of this Contract; and the quantities and amounts of all such works shall be entered in two current account books, one of which books shall be kept in the custody of the said Charles Barry or other the Architect for the time being as aforesaid, and the other of such books shall be kept in the custody of the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators; and the accuracy of every such weekly account or measurement to be made in such book or books as aforesaid shall, once at least in every three months, be attested by the signatures of the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, and the said Charles Barry or other the Architect as aforesaid, or of the person or persons to be respectively appointed by them as aforesaid, and shall, as between the said parties and Her Majesty, her heirs and successors, be for all purposes given in evidence;

And it is hereby agreed, that the Masons' work, the Bricklayers' work, the Carpenters' work, the Smith and Founders' work, the Slaters' work, the Plumbers' work, and the Painters' work done or to be done in execution of this Contract, shall from time to time be measured in the mode and manner mentioned or specified in the second Schedule hereunder written or hereto annexed, and no other;

And it is hereby agreed, that the cost of the execution of all works done under this Contract shall be ascertained by the said Charles Barry, or such other Architect for the time being as aforesaid, in all respects according to the prices stated in the said Schedule of Prices hereunder written or hereto annexed, or if none of the prices in the said Schedule shall apply to the works in question, then by an allowance of the price or prices in proportion to or corresponding, as nearly as may be, with the prices mentioned in the Schedule of Prices hereto annexed for work of the like nature, or having the nearest reference thereto;

And also that they, the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, shall and will erect, build, and complete, and finish the whole of the said erections, buildings, and works hereby agreed to be built, done, and performed; and all alterations and additions, which may be made thereto in pursuance of the provisions hereinbefore contained, on or before the twenty-ninth day of September, which will be in the year of our Lord one thousand eight hundred and forty-six, according to the true intent and meaning of these presents, unless the said Commissioners of Her Majesty's Woods, Forests, Land Revenues, Works, and Buildings for the time being shall, by writing under their hands, consent to any extension of the time for the execution of the said works in the event of any insuperable difficulties arising from the supply of the stone, or from striking and insubordination of workmen, and in case of any such extension, then on or before the expiration of any such extended period;

And further, that if all or any of the stone, iron, timber, bricks, slates, lime, gravel, sand, lead or other materials to be provided and obtained for the completion of the said works as aforesaid, shall at any time, either after or before the same shall have been used and worked up, be found to be imperfect, unsound, or not of the best quality and description of their several kinds, or shall be objected to by the said Charles Barry, or such other Architect for the time being as aforesaid, on that ground, then and in every such case the said Thomas Grissell and Samuel Morton Peto, and the survivor of them, his executors or administrators, shall immediately, upon having notice thereof, remove such of the same stone, iron, timber, bricks, slates, lime, gravel, sand, lead, and other materials as may be found to be imperfect, unsound, or defective, or which shall be objected to as aforesaid, and replace the same respectively by other stone, iron, timber, bricks, slates, lime, gravel, sand, lead, or other materials, as the nature of the case may require, of the best quality and description, and in or of the necessary quantity or measurement without any additional charges for the same;

And further, that they, the said Thomas Grissell and Samuel Morton Peto, and the survivor of them, his executors and administrators, shall and will, immediately upon the completion of the said works, fill up all the holes or trenches to be made or dug, and level the mounds or heaps of earth, that shall or may be made or raised during the continuance and for the purposes of the aforesaid works, and also shall and will clear away all rubbish, which shall or may be occasioned or made in the execution of the same;

And, moreover, that they, the said Thomas Grissell and Samuel Morton Peto, and the survivor of them, his executors and administrators, shall and will bear and pay all such costs and charges, damages and expenses, as shall or may be incurred or sustained on account of or in consequence of any accident or accidents, which shall or may happen by means of holes and trenches connected with the intended works being dug and left unfenced, and materials being left or placed in improper situations by the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, workmen or servants, or otherwise through their or any of their negligence, carelessness, or default, and also shall and will save harmless and keep indemnified the said Commissioners, parties hereto, and the Commissioners for the time being of Her Majesty's Woods, Forests, Land Revenues, Works and Buildings, and Her Majesty, her heirs and successors, and her and their property, from all such costs, damages and expenses, and from all actions, suits, claims and demands for or in respect of the premises, or in anywise relating thereto:

AND THIS INDENTURE FURTHER WITNESSETH, That, in consideration of the several covenants and agreements hereinbefore contained by and on the part and behalf of the said Thomas Grissell and Samuel Morton Peto, their heirs, executors, or administrators, to be done or performed, they the said Henry Pelham Earl of Lincoln, Alexander Milne, and Charles Alexander Gore, as such Commissioners as aforesaid, for and on behalf of Her Majesty, her heirs and successors, do hereby covenant, promise and agree to and with the said Thomas Grissell and Samuel Morton Peto, their executors, administrators and assigns, in manner following, that is to say,

That they the said Commissioners, on behalf of Her Majesty, shall and will well and truly pay, or cause to be paid, unto the said Thomas Grissell and Samuel Morton Peto, their executors, administrators or assigns, the sums of money, as shall become due under these presents, in the proportions, by the instalments, and at the times and in manner hereinafter mentioned, that is to say, when the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, shall have executed any part of the said several works hereby contracted to be done and performed by them as aforesaid, and the Architect for the time being of the said Commissioners shall have inspected the same, and ascertained that it is executed in strict conformity with these presents, and the specification, plans, elevations, sections, drawings and designs herein referred to, and shall have certified the same to the said Commissioners from time to time, then the amount or value of the works so executed according to the true intent and meaning of these presents, and according to the prices stated in the said Schedule of Prices hereunder written, or hereunto annexed, or if such prices shall not be in the Schedule, then after the rate aforesaid, shall be paid to the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators first deducting or detaining thereout the sum of fifteen pounds per cent. upon the amounts so certified as aforesaid, until the sum so retained in the hands of the said Commissioners shall amount to six thousand pounds, and then deducting or retaining out of the subsequent payments the sum of five pounds per cent., until the whole of the sums so retained in the hands of the said Commissioners shall amount in the aggregate to eight thousand pounds, which sum of eight thousand pounds is to be retained in the hands of the said Commissioners, on behalf of Her Majesty, till the completion of this Contract in all respects, pursuant to the stipulations herein contained :

Provided, and it is hereby declared and agreed, that the said Commissioners shall be at liberty (if they shall think proper so to do) to advance to the said Contractors, or the survivor of them, his executors or administrators, such further amounts, being part of such reserved sum as in the judgment of the said Commissioners they may consider the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, as deserving to receive during the progress of the works, such reserved sum in no instance to be reduced below the amount of 6000*l.* :

And further, that within six months after the whole of the said several works shall be completed according to the true intent and meaning of these presents, *all the residue* which shall then remain unpaid of the said sum hereinbefore mentioned, and then due, *shall be paid* to the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, or such Architect for the time being as aforesaid, certifying that the whole of the said several works have been completed and finished to his satisfaction, and according to the true intent and meaning of these presents :

Provided nevertheless, that the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, shall *not* be entitled to demand or receive any moneys *until the works* on which the payment of such moneys are respectively made to depend *shall have been completed,* as to quality and quantity, *to the satisfaction of the said Architect* for the time being, who on one week's notice at least being given him by the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, for that purpose shall examine the said works, so from time to time to be executed by the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, during which examination he shall, if he should so require, be attended by the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, and their or his agent, and then (if the said works shall be so completed) certify the same to the said Commissioners in writing, under his hand, and thereupon the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, shall be entitled to receive from the said Commissioners the amount of the instalment then due in respect of the work so certified to be done, subject nevertheless to such deductions therefrom as thereinbefore mentioned :

Provided also, that in making the calculation of the amount of the sums so from time to time to be paid to the said Thomas Grissell and Samuel Morton Peto as aforesaid, the said Architect for the time being shall, if they the said Commissioners shall think proper so to direct, include in such calculation the amount or value of any materials, wrought or unwrought, furnished, provided and deposited within the site of the said buildings and works, or adjacent thereto, and for the preparation of the necessary works :

Provided always, and it is hereby agreed and declared, by and between the said parties hereto, that all and singular the stone, iron, timber, bricks, slates, lime, gravel, sand, lead, and other materials of every kind, sort, and description whatsoever, necessary or to be provided for the said works, and all machinery, scaffolding, and temporary works, shall, as soon as the same have been provided and deposited within the ground marked out for the deposit of the same, or whereon the said buildings and works are to be erected and executed as aforesaid, be and become the property of Her Majesty, her heirs, and successors, and shall not be removed or taken away from the said premises without the consent in writing of the said Architect for the time being as aforesaid, subject nevertheless to such part or so many of the same stone, iron, timber, bricks, slates, lime, gravel, sand, lead, and other materials, machinery, scaffolding, and temporary works as may be imperfect, unsound, or objected to as aforesaid, becoming the property of the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, upon their or his having to replace or make good the same by other stone, iron, timber, bricks, slates, lime, gravel, sand, lead, or other materials, machinery, scaffolding, and temporary works as aforesaid ;

But neither the said Commissioners, nor the said Charles Barry, or other the Architect for the time being as aforesaid, shall be in anyways answerable or accountable for any loss or damage, which may happen to or in respect of the said materials or things, either by the said materials or things being lost or stolen, or otherwise howsoever :

Provided nevertheless, that if this Contract shall in all respects be fully completed in accordance with these presents, that then and from and after such full completion, all such scaffolding, machinery, and temporary works or materials not used, shall belong to the said Thomas Grissell and Samuel Morton Peto, their executors, administrators, and assigns: Provided always, and it is hereby further declared and agreed, by and between the said parties hereto, that the care of all and singular the said buildings and works hereby contracted to be erected, finished, and done from the commencement thereof until the same shall be completed, and be in the sole and entire possession of the said Commissioners of Her Majesty's Woods, Forests, Land Revenues, Works, and Buildings, on behalf of Her Majesty, shall belong to the said Thomas Grissell and Samuel Morton Peto, their executors and administrators, who shall repair and make good any damage or injury which may, during the progress of such buildings and works, be done or happen to the same, or any of them, or any part thereof, by or through any means or cause whatsoever, and deliver the same into the possession of the said Commissioners at the time hereinbefore fixed for the completion thereof, perfect in all parts and respects:

And the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors and administrators, shall also *repair and make good* any damage or injury which may be done or happen to any buildings or premises adjoining or near to the works hereinbefore contracted for from any circumstances connected with such works; and also that they the said Thomas Grissell and Samuel Morton Peto, their executors and administrators, shall and will repair or re-execute any part or portion of the said buildings and works which may, up to the expiration of six months after the completion of the whole of the said buildings and works as aforesaid, appear to the aforesaid Architect for the time being of the said Commissioners to be requisite and necessary, in consequence of such buildings and works having been improperly erected or completed;

But this provision is not to release or discharge any right of action to which the said Thomas Grissell and Samuel Morton Peto, their executors or administrators, may be liable, by reason of any defective or imperfect execution of any part of the said works:

Provided further, and it is hereby also agreed and declared, that *in case* at any time during the progress of the said erections, buildings, and works, *the same shall not be proceeded with* by the said Thomas Grissell and Samuel Morton Peto, to the satisfaction of the said Commissioners for the time being, or their Architect for the time being, either *as regards* the quantity or quality of the *materials* and *workmanship*, or according to his or their judgment *with sufficient dispatch,* the said Contractors shall, upon receiving notice thereof in writing from the said Commissioners, or their Architect for the time being as aforesaid, within one week from the date thereof, proceed with the works in accordance with such notice, *and upon failure* so to do, the said Architect is hereby authorized *to withhold all further certificates* of payment on account of this Contract, until the said buildings and works shall be proceeded with to the satisfaction of the said Commissioners or their Architect as aforesaid :

Provided always, and it is hereby further declared and agreed by and between the said several parties hereto, that in case the said Thomas Grissell and Samuel Morton Peto, their executors or administrators, *shall fail or make default* in erecting, building, completing, and finishing of the said buildings and works hereby contracted to be erected, built, completed, and finished within the time or extended time hereinbefore covenanted and agreed upon for the completion thereof respectively, that then and in such case they, the said Thomas Grissell and Samuel Morton Peto, their heirs, executors, and administrators, *shall forfeit and pay* to the said Commissioners of Her Majesty's Woods, Forests, Land Revenues, Works, and Buildings, in addition to the actual loss or damage which shall be sustained by them in consequence of the non-completion of the works within the time specified as aforesaid, the further sum of ten pounds sterling per day for every day subsequent to such default as aforesaid, until the said buildings and works shall be completely finished, as and by way of damages, and that all forfeitures and sums of money, which shall or may at any time hereafter become due and payable by or from the said Thomas Grissell and Samuel Morton Peto, their heirs, executors, or administrators, by virtue of this Contract, or the stipulation hereinbefore mentioned and contained, shall from time to time be paid by the said Thomas Grissell and Samuel Morton Peto, their heirs, executors, or administrators, to the said Commissioners of Her Majesty's Woods, Forests, Land Revenues, Works, and Buildings, upon demand thereof, or the same may, at the election of the said Commissioners, be deducted and retained by them from and out of any moneys, which under these presents may be then due, or which may subsequently become due, to the said Thomas Grissell and Samuel Morton Peto :

And further, that in case the said Thomas Grissell and Samuel Morton Peto *shall become insolvent,* or shall be declared *bankrupts,* or shall from any cause whatever be prevented from or delayed in proceeding with or completing the said buildings and works according to this present contract, or if the said Thomas Grissell and Samuel Morton Peto, their executors, administrators, or assigns, shall not, during the progress of the said works, proceed with proper dispatch in the erections and buildings, to the satisfaction of the said Commissioners for the time being of Her Majesty's Woods, Forests, Land Revenues, Works, and Buildings, or of the said Charles Barry, or such other Architect for the time being as aforesaid, *it shall be lawful* to and for the said Commissioners for the time being, or the said Charles Barry, or such other Architect for the time being as aforesaid, to give or cause to be given, or left with or at the usual place of abode of the said Thomas Grissell and Samuel Morton Peto, their executors, administrators, or assigns, or any of them, a notice or notices in writing for the said Thomas Grissell and Samuel Morton Peto, their executors, administrators, or assigns, *to enter into and upon, and to commence and regularly proceed with the said Works;*

And that in case the said Thomas Grissell and Samuel Morton Peto, their executors, administrators, or assigns, *shall, for seven days* after such notice given or left, *make default* in commencing or regularly proceeding with the said works to the satisfaction of the said Commissioners, or their Architect as aforesaid, it shall and *may be lawful* to and for the said Commissioners for the time being of Her Majesty's Woods, Forests, Land Revenues, Works, and Buildings, either at the end of such seven days, or at any time thereafter, *to employ any other respectable workman or workmen*, either by contract, or measure and value, or otherwise, to proceed with the said works, and to complete the same, and pay or cause to be paid to the said workman or workmen the amount of his or their charges for the same, and for all necessary materials to be found or provided for such completion out of the money, which shall be remaining due to the said Thomas Grissell and Samuel Morton Peto, their executors, administrators, or assigns, on account of this Contract:

And further, that *if the said balance-moneys* so due to the said Contractors, including the value of any materials and other the premises, which under or by virtue of these presents shall have been vested in Her Majesty, her heirs and successors, and which have not been paid for, *shall be insufficient* to cover such charges for workmen and materials, as are hereinbefore lastly directed to be paid thereout, then the said Thomas Grissell and Samuel Morton Peto, *their heirs*, executors, or administrators, *shall and will* make good and *pay such deficiency* upon demand; but if the said balance shall be more than sufficient to pay all such charges, then, on the completion of the said works, and payment of all expenses relating thereto, and of any moneys that may become due in respect of the penalties by reason of the non-completion of the said Contract by the said Contractors, such clear balance shall be paid to the said Contractors, their executors, administrators, and assigns:

And it is hereby further agreed, that the *decision of the Architect* for the time being of the said Commissioners for the time being in respect of the *amount, state, and condition of the works* from time to time actually executed, *the quality of the materials* used, or to be used, in and about the said several works hereinbefore contracted to be done and performed, and *in all matters relating to the execution of such works*, and the degree of dispatch with which they should be conducted and carried on, *shall be final* and without appeal:

Provided, and it is hereby further agreed, by and between the said parties to these presents, that the *cofferdam* next the river, adjoining the site of the said buildings and works hereinbefore contracted to be erected, built, and completed, *shall remain for the use of* the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, for landing materials, articles, and things to be used and employed by them or him in or about the said buildings and works during the whole period of the execution of the same, they the said Thomas Grissell and Samuel Morton Peto, and the survivor of them, his executors or administrators, at their or his own costs and charges, from time to time executing and performing all such repairs and works as may be required and necessary to be made and done thereto for the preservation and security of the same, and in reinstating any damage which may happen thereto, by accident or otherwise, during the progress of such works as aforesaid, it being understood and agreed that the said Commissioners, parties hereto, or the Commissioners for the time being of Her Majesty's Woods, Forests, Land Revenues, Works, and Buildings, or their Architect, Surveyors, or workmen, are to have full liberty, power, and authority at all times, whenever they may think proper, to land materials and other things for the use of the said buildings or other works connected with the New Houses of Parliament at the said dam, and to use and employ the machinery, tackle, and apparatus belonging to and employed by the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, for that purpose, provided that such tackle, machinery, and apparatus shall not be then in use or required at the time for use, and no materials be left on the wharf-front, or the roads leading therefrom, so as to impede the works comprised in this Contract, and all damage done to the said tackle, machinery, railways, or landing-places, by the said Commissioners or their Architect, Surveyor, or workmen, by the use thereof, as aforesaid, to be reimbursed to the said Thomas Grissell and Samuel Morton Peto, and the survivor of them, his executors or administrators;

And also, that the said Commissioners, their Architect, Surveyors, and workmen aforesaid, shall also be at liberty at all times during the progress of the said works hereby contracted for, to cart, truck, or otherwise convey such materials and other things from the said dam to any part or portion of the site of the proposed New Houses of Parliament, or the inclosed place surrounding the same, so that they do not thereby unnecessarily impede or delay the works hereby contracted to be performed and executed:

Provided always, and it is hereby declared and agreed, that *in case any difference or dispute* shall at any time arise between the said Thomas Grissell and Samuel Morton Peto, or the survivor of them, his executors or administrators, and the said Charles Barry, or such other Architect for the time being as aforesaid, *touching the mode or manner of measuring the said works* as provided for in the second Schedule to these presents, or *as regards the prices* to be paid for works done, and for which none of the prices in the Schedule of Prices to these presents annexed, shall, in the opinion of either of the parties to these presents, be applicable, or any other matter touching the prices to be charged for any of the work done under this Contract, every such difference or dispute shall from time to time *be referred to the award*, order, or determination of Henry Arthur Hunt, of York-road, Lambeth, Surveyor (or in case of his death, inability, or refusal to act, then to the award, order, or determination of John William Gardiner, of Southampton-row, Russell-square, in the county of Middlesex, Surveyor), whose decision shall be binding and conclusive on the said parties hereto:

Provided always nevertheless, that the provision last hereinbefore contained *shall not extend to the mode or manner of executing the works, the quantity or quality of the materials used* or to be used in and about the same, or the progress made in executing the said works, in all which matters and things *the decision of the said* Charles Barry, or such other Architect for the time being as aforesaid, *shall be final*, and without appeal, nor shall anything in such last-mentioned proviso contained be construed or understood to alter, vary, or affect the prices of any works mentioned in, or the mode of measurement specified by, the Schedules hereunder written or hereto annexed; but such Schedules shall, so far as they can or may apply, be held and deemed as finally and conclusively fixing and determining the prices to be paid for works done, and the mode and manner of measuring such works.

In witness whereof the said parties to these presents have hereunto set their hands and seals the day and year first above written.

SPECIFICATION OF COFFERDAM, FOUNDATIONS, &c.

Before the pile-driving is begun, a trench is to be dredged in the intended line of the cofferdam to the depth of three yards below the level of low water of 16 feet under the high water of Trinity standard, and of such width as is necessary to allow the piling of the dam to be got in clear of the side slopes.

The cofferdam is to be constructed of good and suitable Memel or Danzig fir timber, of the scantlings and dimensions specified in the drawing.

The gauge-piles are to be of length sufficient to be driven to the depth shown, or such other depth or depths as may be necessary, so that the points may be at least two feet in the clay.

The wales are to be in two thicknesses of half timbers, breaking joint properly, and bolted to the gauge-piles, except at the returns, the wales on the splay or angle of which are to be of whole timber in one length, laid over the waling of the sides of the dam, and secured to it by a strap passing round the same, with bolt ends through the wall above, and to be also bolted to the gauge-piles as before, with a cleat or strut to block out the angle ones.

The sheet-piling is to be of whole timber in the outer row, and half timber in the inner row, and is to be driven with a close joint to the depth that has been stated for the main-piles, and to be secured to the walls with inch bolts, one to each pile. The inner row of sheet-piling is to come up to the level shown, and the height above is to be made up with horizontal pieces, bedded down on the tops of the sheet-piles (which are to be cut off level to receive them), and secured with three-quarter inch bolts to furring pieces inserted above the waling at each gauge-pile, and strapped thereto. The sheet-piles in the angles at the returns of the dam are to be splayed on the edges, so as to be fair and close with the square edges of the adjoining piles.

The brace-piles are to be of the length, and driven as shown, with a wale of whole timber, to receive the lower ends of the diagonal and raking braces of the dam, which are to be tightened with wedges to the cleats on the backs of the main-piles, and stiffened with three-inch planks spiked on their sides, and also to the brace-piles immediately below the tie, to steady the dam at top, and the whole is to be firmly secured with proper straps and inch bolts. The braces to the angles of the returns of the dams are to be of whole timber, as on the drawing, with an additional brace-pile behind. Strutting-pieces are also to be inserted between the points of abuttal of the bracing on the main-piles, and such other struts and bracing as may be necessary in getting in the works are also to be used.

The outer and inner rows of piling of the dam are to be securely tied together with two-inch wrought-iron thorough bolts, passing at the heights shown from side to side of the dam, and through the gauge-piles, with proper washers thereto.

The fender-piles are to be driven to the extent shown at each extremity of the dam, and at the distances marked therefrom and from each other, and are to have floating beams or booms attached to them by chains passing round them, so as to allow the booms to move freely up and down with the flow and ebb of the tide.

All the piles are to be shod with proper wrought-iron shoes, to an approved pattern; those for the whole timber-piles weighing 25 lbs. each, and for the half timber ones, 20 lbs. each. The tops of the piles are to be hooped; and all such piling as is not truly and properly driven, and such as is or is supposed to be split or otherwise injured in driving, is to be immediately taken up and replaced.

When the whole of the piles are driven, and properly tied and braced, the space between the rows of close piling is to be cleared out to the clay, and then filled in solid up to the top with good stiff clay, mixed with a portion of gravel, and well worked and pounded in, so as to form a water-tight body, which, as it sinks, is to be made up, and afterwards occasionally rammed when required.

The foot of the piling, both outside and inside the dam, is also to be protected by a mass of proper material from the excavation laid against it, as shown; and where the dam meets the present wharf at either end, the wall is to be cut through, and the puddle carried into the solid ground, as far as may be necessary, the angles being also further protected by proper material laid outside and inside, with dwarf piling to support the same if necessary.

Three trunks or shoots, consisting of two-feet cast-iron pipe, fitted with proper water-tight valves, are to be provided, and fixed with joints; also water-tight in such situations and at such levels as may be judged necessary.

On the completion of the works, the cofferdam is to become the property of the Commissioners, to whom it is to be delivered up by the Contractor in good condition, with all the timbers shown on the drawing for the same; but any extra bracing or other work, that may be required in its construction or use, is to be considered in the light of merely temporary works, and to be removed by the Contractor at the proper time.

Pumping.—For pumping and keeping the works clear of water, a *low-pressure steam-engine*, of not less than 10-horse power, with proper pumps, pumping apparatus, and other necessary machinery of approved construction, and of power sufficient for the purpose, is to be provided and erected on a proper foundation or staging on such part of the dam or ground as shall be pointed out to be ready for work immediately on the completion of the dam. Proper drains to the engine-well are also to be made as shall be directed and kept open, so that every part of the foundation may be kept clear of water while getting in.

Excavation.—The excavation for the foundations is to be got out in lengths of 50 feet, and from the river wall to the front wall of the proposed building, including the sites of such walls, is to be carried to a depth of one foot under the lowermost course of footings of the walls, and of such width beyond them as to allow the foundations to be put in clear of the slopes, which, if necessary to prevent their falling in, are to be supported at foot with piles and planking or sheet-piling, and these are to be removed as the backing of the wall is made up; and when the excavation has been brought to the required depth, the surface is to be cleared and levelled to receive the concrete hereafter specified.

The whole of the material to the depth shown is also to be removed to the extent tinted on drawing, No. 1, and carted or barged away, except such part thereof as may be approved as a fit ingredient in the mortar or concrete, which may be retained for that purpose; and such portion of the present embankment wall, as is included within the said tinted space and also the watermen's stairs, is to be entirely taken down, and the rubbish cleared away, the materials, except such as may be required for purposes to be specified hereafter, becoming the property of the Contractor.

Foundations.—The sheet-piling of the river wall is to be of the best fresh elm, 8 inches thick, sawn all round, and to be shod with wrought-iron shoes weighing 18 lbs. each, and driven with a completely close joint in the most perfect manner, and each pile spiked to the wale, which is to be of sound English or African oak, in long lengths, lapped at the joints, and the whole is to be secured to the wall by means of inch wrought-iron ties, with cast-iron countersunk washers outside, passing through the wale sunk into the stonework between the first and second course of footings, and terminating at an average length of 6 feet with a nut, screw and washer 12 inches long, 6 inches wide and inch thick, let into the stone at a back vertical joint of one of such courses, and run with lead.

The concrete of the foundations of all the walls is to consist of 6 measures of gravel and sand to 1 of ground lime, mixed dry, and then well worked together with water, and in this state teemed and thrown into the work from a height of at least 10 feet, and is to be brought to a level surface at the proper depth to receive the first footing-course, which is to bed solid upon it.

Footing-courses.—The two footing-courses of all the walls are to be formed throughout of 6-inch Yorkshire landings of good tough quality, in large pieces, with fair beds squared on the joints, so as to lie close, and to be laid in mortar with the joints properly broken as shown, the face being also levelled next the sheet-piling of the river wall to suit the inclination of the same.

The two next courses of the river wall are to be faced with the best Bramley-fall or other stone of equal and approved quality, in courses of the height marked, rough-picked on face, and in other respects dressed and laid in the manner hereafter described for the ashlar generally, and of the same proportion of lengths and depths.

Granite Facing.—The ashlar facing of the river wall and of the return walls of the wings is to be of blue Aberdeen or blue Peterhead, or Herm or Dalkey,* or the fine-grained Dunleary* granite, all of the best quality, in the uppermost six courses of the face generally, and in the spandrils of the stairs, as well as in all quoins throughout, and of the best Penryn, Haytor, Dartmoor, Fowey or Galloway granite in the rest of the work; and all the granite, of whichever of these descriptions, is to be without black spots, redness or stains of any kind; and should any two or more of the said kinds be used together, it is to be perfectly understood that uniformity of colour and similarity of quality are indispensable. The stones are to be fine-axed on the face to the true curve of the wall, so as to present a fair and perfect surface, at least equal to a sample, which will be shown to intending Contractors.† The beds and joints are to be full and square for their whole depth (particular care being taken to preserve the outer arrisses), so that when set the work may be close and solid throughout, without any packing, and no joint exceeding an eighth of an inch in thickness. The backs are to be scappled with a pick square to the beds, and with a fair surface to receive the brickwork.

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* Near Dublin.

† The specimen stone will be shown by the porter at the door of the Speaker's house.

The courses are to be of the heights figured, and to be laid with one header to every two stretchers; the heading-stones are not to be less in length of face than the height of the courses of which they are to form part, nor less in depth of top bed than double the height of the said courses; the stretchers are not to be less in length of face than twice the height of the courses wherein they are to be inserted, nor less in depth at top than the height of the said courses; and the bond in the vertical joints is not to be in any case less than one half of the height of the course immediately below them.

The spandril walls of the flights of steps in the wings are also to be faced to the extent shown with granite ashlar in all respects as above described, the openings having a splay and moulded base on the angle, as shown on the drawing, No. 6.

The steps, which are to be built with the rest of the work, and to be each in one length, are to be of the best Guernsey granite, axed and tooled smooth on the two faces, with the top weathered and the edge chamfered, the beds and ends worked fair and out of winding, and the backs rough-picked, to be bedded solid on the brickwork, sunk an inch into the step beneath, and lapped over it at least 2 inches, and the ends also let up at least 2 inches into the ashlar of the spandrils, which is to be neatly cut out to admit them.

The stonework is to be laid out on a thin bed of mortar prepared as hereafter directed, the front joints being pointed with cement and then grouted full, and all the stones are to be worked on the ground and set with lewises and proper tackling.

Brickwork.—The back part of the river wall and returns and the counterforts, the whole of the front wall of the building, including the octagonal turrets therein, and the returns of the wings and stair walls, and also the arch under the steps from the foundation upwards, and other work shown on the drawings, are to be of brickwork, consisting of sound, hard, and well-burned square stocks, laid closely and well bonded, the joints being broken in a careful manner, and not exceeding a quarter of an inch in thickness, every course flushed up solid with thin mortar, and the filling-in bricks rubbed in so as to make each joint flush and full of mortar, and the whole is to be level at the top of every course of the facing ashlar. The arching for the support of the stairs is to be as shown, springing from cut skew backs and properly keyed in, the whole being flushed in solid after the arch is turned, and the bricks in the angles of all splayed work are to be neatly cut.

Backing and Filling-in.—The space between the river wall and the front wall of the building is to be brought up to the level of the top of the walls with concrete composed of 10 measures of gravel and sand to 1 of unslacked lime washed in with water, and levelled in regular and thin courses as the work proceeds.

The remaining portion of the space tinted on the general plan and sections, the part under the stairs, and the hearting of the hollow octagonal turrets, are to be made up to the levels shown with concrete, same as has been described for the foundations of the wall, and used in like manner.

The space excavated in front of the river wall, to get in the foundations thereof, is to be made up to the level shown in the section and cut of the brace-piles of the dam with pieces of burrs of the present embankment wall laid at the foot of the proposed wall, and well grouted with concrete, same as the backing thereof.

Mortar and Concrete.—The mortar throughout is to be composed of 1 measure of the best fresh-burned Merstham, Dorking, or other equal and approved lime, 1 measure of finely-ground genuine Italian pozzuolana, and 2 measures of sharp above-bridge river sand, all clean and free from rubbish, dirt, and other impurities; the proportions are to be correctly ascertained, after which the lime (which is to be brought from the kiln in small quantities, as required, and kept dry under cover) is to be slacked and mixed with the pozzuolana and sand; they are then to be passed together in the dry state through a screen, the water added, the mortar well tempered and worked to a tough and proper consistency in horse or pug mills for the work generally: but for the stonework, ground with edge stones worked either by horses or by means of gear attached to the steam-engine for pumping the water out of the dam.

Fresh-burned lime of the above description, and clean coarse river gravel, having mixed with it a proper quantity of sharp sand, are also to be used in proportions stated in making the concrete, that has been specified for the foundation of the walls and the backing.

Hoarding.—A permanent hoard 8 feet 6 inches high is to be placed across New Palace-yard, and on the east side of the Speaker's court, as shown in the drawing, No. 1, to be formed of $\frac{3}{4}$ rough deal boarding, with fir posts 6 by 6 driven into the ground at least 3 feet, and 3 arris rails framed thereto, 5 by 5. A pair of strong-ledged folding gates are also to be erected in the centre of New Palace-yard, as shown, with wicket therein, and good stock lock, the whole to fasten on the inside with wood bar, hasp, staple, and padlock. The present hoard at the north-east angle of New Palace-yard, adjoining Westminster Bridge, is to be increased in height so as to be 8 feet 6 inches above the footpath, &c., and where defective to be repaired and made perfect. A small shed building is to be erected within the hoard at the gates, 12 feet by 6 feet, for the use of the gate-keeper, with a small grate, a casement window, 5 feet by 3 feet, and ledged folding shutters, a desk 2 feet wide, the entire length of the building, with 2 drawers, locks, and keys, the room being floored and ceiled, and having a ledged door and good lock.

COPY OF TENDER FOR WORKS.

To the Commissioners of Her Majesty's Woods, Works, &c.

My Lords and Gentlemen,—We do hereby offer to contract for the execution of all the works necessary in the construction of the river wall and other works forming part of the foundations of the proposed New Houses of Parliament, according to the plans and Specifications for the same, which have been examined by us, for the sum of 74,373*l.*, including the cofferdam.

And we do engage to complete the cofferdam and have it cleared of water within eight calendar months from the time of receiving an order to commence, and to finish the whole of the works contained in the Contract, including the removal of all temporary works, except the cofferdam and hoarding, which are to be left in a perfect state, and to become your property within 16 months from the same date.

And we agree to execute any works, that may be ordered extra to the Contract, and to allow and deduct for works included in the Specification, but not ordered to be executed, and also to account for such as may be modified or altered in any way, at and according to the following rates and prices, which are the same as this Tender has been formed on, and are calculated for the best materials of the kind in every case and for dimensions measured in the work, and include all charges for freight, carriage, working, and setting, or otherwise fixing; and also the costs of all temporary works necessary therein; videlicet:—

	£	*s.*	*d.*
1. Excavating or dredging in river, including disposal of material, at per cubic yard	0	2	1

	£	s.	d.
2. Excavating within cofferdam, including disposal of material, at per cubic yard	0	2	11
3. Concrete of gravel and lime, as specified for works of foundations, at per cubic yard	0	4	9
4. Concrete of gravel and lime, as specified for backing under terrace, at per cubic yard	0	3	5
5. English or African oak in waling, at per cubic foot	0	5	9
6. Elm in piling of foundations, at per cubic foot	0	4	3

	Blue Aberdeen, Blue Peterhead, Herm, Dalkey, or Dunleary.			Penryn, Haytor, Dartmoor, Fowey, or Galloway.		
	£	s.	d.			
7. Granite, without labour, at per cubic foot	0	3	6	0	2	11
8. Granite in facing ashlar generally, at per cubic foot .	0	5	9	0	5	2
9. Blue Aberdeen or Peterhead granite in quoin stones, at per cubic foot	0	6	3	—		

	£	s.	d.
10. Guernsey granite in steps, at per cubic foot	0	15	4
11. Yorkshire landings, 6 inches thick, in footing courses, at per superficial foot .	0	1	10
12. Bramley-fall stone, in courses above footings, at per cubic foot	0	3	3

13. Labour only in granite, at per foot superficial; viz.:

	Blue Aberdeen, Blue Peterhead, Herm, Dalkey, or Dunleary.			Penryn, Haytor, Dartmoor, Fowey, or Galloway.		
	£	s.	d.			
In plain work . . .	0	1	8	0	1	6
In sunk work . . .	0	2	0	0	1	10
In moulded work . . .	0	4	0	0	4	0
In beds and joints . . .	0	0	10	0	0	10

	£	s.	d.
14. Brickwork as specified, including curved and splayed work, at per rod of 306 cubic feet	12	7	0
15. Brickwork, including as above, with mortar of 2½ measures of sand to 1 of lime, at per rod	11	5	0

	£	s.	d.
16. Wrought-iron in pile shoes, at per cwt.	1	8	0
17. Wrought-iron in bolts, spikes, ties, &c., at per cwt.	1	2	8
18. Excavator, at per day of 10 working hours	0	4	6
19. Labourer, at per day of 10 working hours	0	4	0
20. Carpenter, at ditto	0	6	0
21. Mason, at ditto	0	6	0
22. Smith, at ditto	0	6	0
23. For the cofferdam complete, according to Contract, exclusive of engine and pumping apparatus, &c., the sum of	24,195	0	0
24. If the cofferdam is allowed to be removed by the Contractor on the completion of his Contract (the holes in the ground being washed in with gravel), for the materials thereof deduct from the Contract amount the sum of	7,000	0	0

We have, &c., HENRY and JOHN LEE,
Chiswell-street, 28 August, 1837.

CONTRACT, No. 2.

SPECIFICATION *of sundry Works required to be done in forming a Portion of the* FOUNDATIONS *of the proposed New Houses of Parliament, and a* SEWER *in Connexion therewith, according to the accompanying Plan; signed by Charles Barry, Architect.*

EXCAVATOR.

The ground to be excavated where required, and of sufficient depth for the concrete foundations, which may vary to the extent of two feet either above or below the level shown in the drawings, according to the nature of the soil, and also for the sewer and the concrete under the same; that part of the sewer from *a* to *b* is to be open cutting, and from *b* to its junction with the sewer in Bridge-street it is to be tunnelled; the whole of the ground and rubbish so dug out to be entirely removed.

In the excavating, should any old foundations, sewers, tanks, cesspools, or other impediments be met with, the same are to be entirely removed, and any holes that may be created thereby to be filled in with concrete of the quality hereafter mentioned.

All strutting, pumping of water, and other casualties, that may arise to impede the proper execution of the works, to be provided for by the Contractor, and to be considered within his Contract. It is, however, understood that the Contractors are to be absolved from the cost and responsibility of upholding the surrounding buildings and the foundations thereof.

CONCRETE.

The concrete forming the foundations is to consist of six measures of gravel and sand to one of ground stone lime, mixed dry, and then well worked together with water, and in this state teemed and thrown into the trench from a height of at least 10 feet from the present surface ground; the top to be levelled to an even surface four feet below Trinity high-water mark. The concrete for the foundations of the sewer to be of the like description.

BRICKLAYER.

The bricks to be sound, hard, well-burned square stocks, equal to a sample to be approved by the Architect and deposited with the Clerk of the Works; the whole of the brickwork to be laid English bond, and no four courses to exceed 11½ inches, and every course flushed up solid in mortar.

The mortar to be composed of stone lime and sharp river sand, in the proportion of three measures of sand to one of lime, the whole well mixed in a pug-mill. The lime to be kept in an inclosed shed, and no more mixed at one time than is sufficient for the day's consumption.

The sewer is to be of the form shown by Drawing No. 2, three feet clear width, and 5 feet 5 inches clear height, one brick invert, with one course of brickwork under 1½ brick sides and two half-brick rings, to form covering arch; all the work, up to three inches above the springing of the invert, is to be built in Roman cement and sand, of the proportion of one measure of sand to one equal measure of cement; the other parts to be laid in mortar to a very close joint; the covering arch to be as nearly brick and brick as possible. The bottom of the sewer, at its highest point *c*, is to be nine feet below the Trinity standard, from which it is to fall to its junction with the old sewer in Bridge-street, where it is to be 10 feet below that level; and in the opposite direction, from *c* to *a*, it is to fall in the same degree: great care must be taken to have the fall uniform throughout, so that no part of the sewer should dip below its true level. The line from *a* to *b* is to be open cutting, the ground well filled in as the work proceeds, and rammed both at the sides and top of the sewer up to the present level of the ground. From *b* to its junction with the sewer in Bridge-street it is to be tunnelled, the junction carefully made good in cement, and the ground on each side of the sewer and over the same to be filled in and well rammed every two feet as the work is built.

Should the paving or roadway above the line of sewer sink within three months after the completion of the Contract, the Contractor is to take up the same and relay it at his own expense; he is likewise, in forming the tunnel, to leave in such timbers as the Architect may think necessary, and to pay the fees to the Surveyor of the Commissioners of Sewers.

All coins or other articles of antiquity that may be met with in the course of excavating to be delivered to the Architect.

CHARLES BARRY, Architect,
8 November, 1837.
HENRY LEE.
JOHN LEE.

CONTRACT, No. 3.

For completing CARCASE *of the River Front, and the North and South* FLANKS *of the Building.*

Architect's Offices, New Houses of Parliament,
18 June, 1839.

Sir,—The works in the foundations of the New Houses of Parliament are now so far advanced, as to render it desirable, that a Contract should be made for a portion of the superstructure as soon as possible, in order that there may not be any delay in carrying forward the work upon the completion of the present Contract.

I have to request, therefore, that the under-mentioned Builders may be written to for tenders for the carcase of that portion of the intended building, which is towards the river, that they may be invited to see the conditions, specification, and drawings at these offices, and be required to deliver their tenders within 1 month from the time of sending them notice.

Mr. Baker, Stangate, Lambeth.
Messrs. Grissell & Peto, York-road, Lambeth.

Mr. Cubitt, Gray's Inn-lane.
Messrs. Lee, Chiswell-street.
Messrs. Piper & Son, Bishopsgate-street.
Mr. Winsland, Duke-street, Great Russell-street.
Mr. Grimsdell, Sun-street, Bishopsgate-street.
Mr. Bennett, Rochester-row, Tothill-fields.

Henry Hake Seward, Esq. I am, &c. CHARLES BARRY.

Office of Woods, &c., 27 June, 1839.

My Lords,—In obedience to your Lordships' directions of the 11th June, 1838, upon the subject of the further Contracts that would be required for building the new Houses of Parliament, we beg leave to represent that Mr. Barry has stated to us, that the works in the foundations of the New Houses are so far advanced, as to render it desirable to contract for the carcase of that portion of the superstructure, which forms the river front as soon as possible, in order that there may not be any delay in carrying forward the works upon the completion of the present Contracts.

Under these circumstances, we have thought it proper to apply to 9 of the principal Builders in London for tenders for the works in question, which will be delivered in about a month or five weeks, and the result of the competition shall be immediately reported to your Lordships.

In the meantime, according to Mr. Barry's representation to us, we are enabled to state, for your Lordships' further information, that the balance of the votes already granted for this service, and the sum of 50,300*l.* estimated for the year 1839-40, will cover all the payments, that we shall be called upon to make between this date and the end of June, 1840, on account of the New Houses of Parliament.

The Right Honourable We are, &c. DUNCANNON.
The Lords Commissioners of Her Majesty's Treasury. A. MILNE.

Office of Woods, &c., 29 October, 1839.

My Lords,—With reference to a Report made by us on the 27th of June last, upon the subject of Contracts proposed to be entered into for the New Houses of Parliament, and to your Lordships' directions of the 10th July upon the same, we beg leave to submit, for your Lordships' information, a statement of the amounts of the several tenders, the result of the competition suggested for building the carcase of that portion of the New Houses of Parliament which will form the river front; viz.—

		£	s.	d.
Messrs.	Grissell and Peto	159,718	0	0
„	Baker and Son	167,746	0	0
„	Cubitt	174,453	0	0
„	Winsland	177,172	19	0
„	Grimsdell	181,588	0	0
„	Piper and Son	183,106	7	4
„	Hicks and Son	183,699	0	0
„	Bennett	184,639	0	0
„	Lee; tender not opened by the Board, not being accompanied by a schedule of prices, as directed.			

Messrs. Grissell and Peto's tender, a copy of which is herewith transmitted, being the lowest, is accepted; but as it was provided, the tenders should specify sums for the execution of the external masonry according to the stone, which might be hereafter fixed upon to be used, the actual Contract to be entered into consequently depends upon the stone or stones. Upon this subject we beg to transmit copy of Mr. Barry's Report to us; and also, for your Lordships' further information, we add copy of that gentleman's statement, showing that the accepted tender, if the Steetley stone be used for all the Mason's work, is 145,053*l.*, which is 3,604*l.* 2*s.* 3*d.* below the calculation of the original estimate; and if the Bolsover stone be used for the whole of the external work, and Steetley stone for the rest of the masonry, the tender is 157,615*l.*, which is 8,957*l.* 17*s.* 9*d.*, above the calculation of the original estimate; but the ultimate cost of the works comprised in the Contract under consideration will depend upon the quantity of Bolsover stone, which may hereafter be determined to be employed; and Mr. Barry states, that the probable result will be very nearly in accordance with the calculation of the original estimate.

We beg further to state, that the works included in the Contract now under consideration are to be completed within three years from the time of executing the Contract deed.

We are, &c. Duncannon.
A. Milne.
Charles Gore.

The Right Honourable
The Lord Commissioners of
Her Majesty's Treasury.

Westminster, 10 October, 1839.

Sir,—I forward herewith the conditions, upon which the tender of Messrs. Grissell and Peto for the third Contract relative to the rebuilding the Houses of Parliament has been accepted, in order that the Contract may be prepared and signed as early as possible.

The Contract should refer to the specification and drawings, according to which the tender has been made, as well as to the tender itself, and the schedule of prices which accompanied it; and the Contractors should be made liable to execute the work at any of the amounts mentioned in the tender, according to the stone or stones, that may be chosen for the several portions of the building therein specified, or according to any quantity of such stones, that may be used, at the prices which refer to them in the schedule.

I send also statements relative to the amount of the proposed Contract, and of the amount of work included in the third Contract, according to the calculations of the original estimate.

H. H. Seward, Esq., &c. &c. &c. I am, &c. CHARLES BARRY.

	£	s.	d.
Amount of the cost of the carcase of the river front, the north and south flanks, the great public staircase, waiting-halls, corridors, &c., forming the third Contract, according to the calculations in the original estimate . . .	173,565	2	3
Deduct for the estimated cost of the foundations included in the above sum, and forming part of the works in the first Contract	24,908	0	0
Amount of the cost of work comprised in the third Contract, according to the original calculations	148,657	2	3

10 October, 1839. CHARLES BARRY, Architect.

	£	s.	d.
Amount of Messrs. Peto & Grissell's tender for the work included in the third Contract, if the Steetley stone be used for the Mason's work . .	145,053	0	0
Ditto, ditto, if Bolsover stone be used for the whole of the external Mason's work, and Steetley stone for the rest of the masonry	157,615	0	0

It is desirable that the Contract should be made at the amount of the tender for Bolsover stone, as above stated, in order to allow of the employment of that material in the plinth, string courses, copings, pinnacles, and other exposed parts of the building, at the schedule prices. The rest of the masonry may be of the Steetley stone.

According to this arrangement, the ultimate cost of the work comprised in the third Contract will probably accord very nearly with the calculations in the original estimate.

10 October, 1839. CHARLES BARRY.

THE SCHEDULE REFERRED TO IN AND BY THE FOREGOING AGREEMENT.

Specification of sundry Works to be executed in erecting the Carcase of a Portion of the New Houses of Parliament towards the River, together with Part of the North and South Flanks of the intended Building, according to various Plans, Elevations, and Sections, numbered from 1 *to* 58, *prepared for the purpose, by Charles Barry, Architect.*

The extent of the work included in the present Contract is shown by the block plan and block sections, numbered 1, as well as the extent of space in and about the intended building, which is available for the purpose of landing, disposing and working materials.

The Contractor is to take the site in the state, in which it will be left on the first day of January one thousand eight hundred and forty, the whole of the walls of the building within the limits of the proposed Contract being brought up to the level of 2 feet 3 inches above high-water mark, according to the Trinity standard of one thousand eight hundred, which is marked in the centre archway of Westminster Bridge; and the area between the walls will be filled up to the level of 2 feet below the level of the finished ground-floor line.

The cofferdam towards the river (excepting the temporary stages and erections, the property of Messrs. Lee) will remain for the use of the Contractor in landing materials, &c., during the entire execution of the works; but he is to do all that is necessary from time to time for its perfect security and preservation.

All superfluous earth and rubbish is from time to time to be carried away or removed from the site of the intended New Houses of Parliament during the progress of and at the completion of the works included in this Contract.

BRICKLAYER.

The backing up of the stone facing of the external walls and the whole of the inner walls of the building, shown by a tint of red, are to be of brickwork, and built of the several heights and thicknesses as shown on the accompanying drawings, of the best hard, well-burnt, sound stock bricks, laid in mortar composed of the best Dorking or Merstham or other equal and approved stone lime, and clean sharp river sand, free from all filth and impurities, well mixed together in the proportion of two equal measures of sand to one equal measure of lime, ground and tempered in a pug or horse-mill until it becomes of an equal and proper consistency.

The lime is to be thoroughly and freshly burnt, and must be kept in an enclosed shed; and no more mortar is to be made at one time, than is sufficient for each day's consumption.

The bricks are to be laid with a close joint, properly bonded, and well flushed up solid with mortar, and the filling-in bricks are to be rubbed in and drawn together, so as to make each joint flush and full of mortar, or otherwise to be grouted, if directed.

The whole of the brickwork in external as well as internal walls is to be brought up level at the top of every course of the external stone ashlar; and none of the bedding joints of mortar to exceed a quarter of an inch in thickness; and the bricks to be used in a humid state.

Tiers of hoop-iron, well pitched and sanded, to be laid through the whole thickness of the brickwork of the main walls 2 inches apart, and in four consecutive bedding joints immediately under the floors, in four situations, and united with other tiers of hoop-iron similarly prepared and laid through the whole thickness of all the inner walls, in two consecutive courses, level with those of the two upper courses above mentioned; other tiers of hoop-iron similarly prepared laid in two consecutive courses throughout the backing of the external walls, and the whole of the inner walls in 11 situations in the entire height of the building, as will be directed; the whole to be so arranged as not to interfere with any of the air and smoke flues within the several walls. The quantity to be provided for this purpose is to be 680,000 yards run, any portion of which, if not required, is to be deducted at the schedule price; one-third of the quantity to be laid diagonally in short lengths.

The backs of the stone parapets to be rendered with Keen's patent cement, properly jointed with the flashings.

Brick discharging arches over all openings of doors, windows, &c., where the height will admit, to be turned in three half-brick rings.

All the Roman cement to be composed of one measure of the best fresh-ground Roman cement that can be procured, mixed with one equal measure of clean sharp sand, to be well chafed up for use in small quantities and used immediately.

The fire-proof arches in the floor over the Libraries, Committee-rooms, &c., on the principal floor, and over the whole of the ground-story of the wings, to be turned in 9-inch work with sound hard stocks, and those which form the abutment on the iron bearers, are to be cut or made to the form given by the radius of curvature.

The spandrils of these arches and over the whole surface 3 inches above them are to be covered with brickwork.

All splays, skewbacks, and other cuttings, to be carefully formed to the required angles.

The flues to the whole of the fireplaces are to be 14 × 12; those for the kitchen chimneys 14 × 14; and the whole are to be well pargetted.

594 rods, 194 feet of reduced brickwork laid in cement in lieu of mortar, to be provided to be used in the fire-proof or other arches, and in such other parts as may be directed.

The whole of the walls of the building are to be carried up together, and from time to time to finish level throughout, at least every 6 feet in height.

The thin walls, or such as are not carried up to the full height of the building, to be worked at their junction with the main or thicker walls into a chase or indent, if directed.

The whole of the walls to be effectually covered from time to time with boards or otherwise, whenever the Architect shall direct.

The fire-proof arches are not to be built until the building is covered in; and projecting corbel courses properly cut to the required radius must be left to receive them.

Insert the cast-iron corbels where required, and bed all templates, corbels, &c., as may be directed.

Good and sufficient scaffolding is to be provided for the whole of the brickwork, and is not to be struck until directed by the Architect.

The soffits of the fire-proof and other arches in the Repositories are to be stopped and neatly pointed, after the centering is struck.

Point with cement to all the lead flashings.

Provide and fix six rings for smoke-jacks, 2 feet 2 inches diameter.

Provide for coring-flues, fifteen pounds.

Provide for District Surveyors and other fees, one hundred pounds.

CARPENTER.

The whole of the timbers for the floors, partitions, roofs, &c., to be of the best Baltic wood, free from large knots, shakes, wains, &c.; and all the oak that is required to be of English growth and of the best description.

The wall plates are to be in long lengths (not less than 25 feet), united well together with scarfs, two feet long, wedged in the centre, and bolted with 2 half-inch bolts to each.

The joists are to be notched down and to be well spiked upon them, or in some cases they are to be framed into trimmers, fixed and secured like the wall plates.

No bond timbers or wood bricks, or any other timbers, are to be laid in the walls.

The wall plates will be bolted to the corbels, for which a provision is made in the Smith's Specification; but the Carpenter must include the expense of fixing the same in the respective situations.

The hips, ridges, and valleys, are to be of 2-inch deal, 12 inches wide, and rounded where required.

The roofs are to be framed in all respects according to the form, scantlings, and method, shown or described in the drawings.

The slated roofs to have inch battens 3 inches wide, with 1¼-inch eaves, boards, and proper tilting fillets.

The flats are to have inch yellow deal boarding, edges shot, and 1½-inch deal rounded rolls, 2 feet 6 inches apart.

The gutters are to be of 1¼-inch deal, well secured to proper bearers and uprights; the bottom to be laid with a 2-inch current and with 2-inch dips, as shown in the drawings.

Proper dovetailed cesspools to the entire width of the gutters, made and fixed in the several situations, shown in the drawings, and are to have a hole cut through the same for the socket pipe.

The lear or sideboards of the gutters are to be rebated to receive the iron trellis gratings.

Rounded and saddled rolls to the upright angles of dormers 3½ × 2.

Deal rounded rolls 2½ inches by 1½ inch, average 20 inches long, every 6 feet apart, one end rounded, the other bevelled, fixed with two 4-inch screws to lead plugs made in the stone to receive the lead aprons of the coping stones immediately under the embattled parapets.

Provide 32 ornaments to dormers; the value, including fixing, to be twenty-five shillings each, prime cost.

The ends of the trusses and sills of partitions only are to have their ends bearing on the walls 2 inches for the purpose of steadying them, and are to be secured to the iron corbels under them by bolts provided as before mentioned.

The floors, partitions, ceilings, joists, binders, &c., are to be framed in all respects according to the drawings, and as will be directed.

None of the floor or ceiling joists, rafters, quarters of partitions, &c., are in any case to be more than 12 inches apart.

All rods, moulds, trammels, levels, &c., which may be required by the respective workmen employed are to be provided.

All proper centring to arches, apertures, &c., that may be required are to be provided and securely fixed, and are not to be removed until directed by the Architect.

Allow beyond what is described or shown on the drawings 1000 feet cube of fir framed, and also allow 2500 feet cube fir timber, of various scantling, and labour thereto, to be applied as temporary ties, stays, and braces, to the walls of building, including the removal and refixing the same as required, after which it is to be the property of the Contractor.

Allow for thoroughly saturating the whole of the fir that may be required, after having been sawn into scantlings, with Kyan's patent solution for the prevention of dry-rot, &c.

Allow for roomy and convenient office for the Clerk of the Works, with all necessary and commodious fittings.

MASON.

The plinth of the external walls, as shown by the drawings, is to be of the best granite from the Fogging Tor Quarries, Devonshire, from Penryn, or from the Island of Guernsey, of a fine grain, similar to that of the best Aberdeen, or from Aberdeen, and of an even colour throughout, being entirely free from large crystals of quartz or felspar, as well as from redness or stains.

Every stone is to be fine axed on the external face so as to present a fair and perfectly even surface, at least equal to a sample now upon the ground, which has been approved by the Architect.

The beds and joints are to be full and square for their whole depths, particular care being taken to preserve the outer arrisses, so that when the work is set, it may be close and solid throughout, without any packing; and no joint is to exceed one-eighth of an inch in thickness.

The backs are to be picked square with the beds, so as to present a fair surface against the brick backing.

All the courses of stone are to be of the heights and beds figured on the drawing, and the whole is to be bonded as therein shown.

The granite work throughout is to be laid on a thin bed of mortar prepared as hereafter described, the face of the joints being pointed with cement, and the rest grouted full with mortar.

All the stones are to be worked on the ground and set with lewises and proper tackling; all the arrisses and angles of the buttresses are to be very carefully kept, and the lines of the mouldings, the curves and the mitres (which latter are in all cases to be worked out of the solid) are to be chiselled to their true and proper form.

The Contractor will have reference, in settling the first course of the plinth of the wings and flanks, to the bonding of the work upon which it will be placed, as no stone will be allowed to break joint less than half the height of the course.

The plinth of the elevation towards the courts at the back of the river front is to be likewise of granite of the best quality, worked and set as before described; the dimensions and form are to be as shown on the drawings, the beds to be 16½ inches in width, and the length of stones may vary from 3 feet 6 inches to 7 feet.

The mortar for the granite work is to be composed of one measure of fine ground genuine Italian Pozzolana, two equal measures of clear river sand, and one equal measure of good fresh burnt Dorking lime mixed with water and well worked to a proper consistency, and in that state ground with edge stones.

The other parts of the building, which are intended to be faced or constructed of stone, are indicated in the drawings by a tint of brown.

The external walls of the building and all such parts thereof as may be seen from any point of view externally are to be faced with either Portland, Darley Dale, Bolsover, Anston or Steetley stone of the very best and most durable quality, and of an uniform colour, free from all loose vents, holes and all other defects, or with stone from the immediate vicinity of the above-named places, of similar quality and colour.

The stone for the facing and decorations of the walls of the internal elevations towards the courts will be either Mansfield, Haydor or Steetley, and for all the decorative masonry in the interior of the building will be either Haydor or Steetley.

For the construction of the masonry generally, the heights of the various courses of ashlar, the scantlings of the dressings, &c., every information is afforded by the drawings.

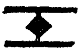
The external face of the work throughout, including the dressings, is to be fine-chiselled, equal to a sample approved by the Architect now upon the site of the building, or rubbed, and the whole of the face of the internal work to be worked fair and rubbed or fine-chiselled.

The plain work in all cases to be true and out of winding, and the mouldings carefully worked to preserve their true form and arrisses.

The beds and joints to be random-chiselled, fair and out of winding, and to be sunk wherever necessary to make good work.

The backs of the ashlar and dressings to be roughly drafted square with the beds.

Every stone to hold its full length and height square to the back, and to be secured to the brickwork of the backing by iron cramps at right angles with the face made out of saw plate 1½ inch wide, well pitched and sanded, and of such lengths as to turn down into the stone 1 inch within 4 inches at least from the surface, and up into the brickwork 2 inches, to the extent of 9 inches from the back of each stone respectively; the mortices in the stones for the receptions of such cramps to be filled up and flushed with Roman cement.

The vertical joints throughout to have a rough joggle 10 inches deep from the top bed, and 1 inch square, thus,  in which is to be dropped one or more stone pebbles about ⅞ diameter, when the whole cavity is to be filled and flushed up with liquid Roman cement.

Every attention is to be paid to the bonding of the work in the most perfect manner, according to the drawings.

The pinnacles and turret tops are to be in single stones in each course, and every bed is to be plugged together with at least 2-inch square dovetailed iron plugs, 10 inches long, fixed with cement.

The horizontal and arched beds of the mullions and tracery of the windows to be also secured each with a hard stone plug 1½ inch square and 2 inches long, carefully fixed with cement.

The horizontal beds of the parapets to be secured with stone dowels 2 inches square and 2 inches long, carefully fitted and fixed with cement.

The vertical points to be joggled as before described.

The ornamental vanes on the angles and summits of the turrets are not to be included in this contract, but the Contractor must calculate upon cutting the holes to receive them where shown on the drawings to a large scale.

For the joggles, plugs, dowels, &c., before described, the Contractor must include in his estimate the following:—

Nos. 2,274	saw plate cramps	11	in. long, let	into stone	5 in.
30,352	ditto	16	ditto	ditto	5 in.
10,101	ditto	18	ditto	ditto	7 in.
908	ditto	19	ditto	ditto	7 in.
16,336	ditto	21	ditto	ditto	8 in.
1,893	ditto	25	ditto	ditto	13 in.
18	ditto	26	ditto	ditto	9 in.
9	ditto	28	ditto	ditto	9 in.
19	ditto	32	ditto	ditto	10 in.
24	ditto	36	ditto	ditto	12 in.
410	ditto	24	ditto let in both ends to divisions of Repositories.		
1,694	ditto	18	ditto	let into granite	6 in.
546	ditto	21	ditto	ditto	6 in.

6,220 cast-iron dovetailed cramps, 5 in. long, $\frac{5}{8}$ thick.
2,486 wrought-iron dovetailed plugs, 2″ × 2″ × 10 in. long.
24 large double plugs, each with 8 feet of groove.
30 small copper dowels and holes.
57,805 joggles and mortices, 2 in. × 2 in. × 2 in.
220 ditto ditto ditto lower mortice in granite.
1,314 ditto ditto ditto in granite plinth.
54,977 ditto and pebbles.
1,158 ditto ditto in granite.

Provide and fix a 6-inch York stone template, 5 feet long and 2 feet wide, under each of the bearing ends of the main iron beams in the fire-proof floors over the Libraries and Committee-rooms on the ground-floor; cut therein a 2-inch square mortice, 2 inches deep, for fixing of the beam, and run the same with lead.

Provide 3-inch Yorkshire stone templates, 2 feet long and 9 inches wide, for the bearing ends of all the lesser beams, and provide 5000 feet superficial 3-inch tooled paving for covers to smoke and other flues not otherwise described.

Provide and fix all necessary arch springers that may be shown on the drawings.

All the chimney openings are to have 3-inch tooled Yorkshire landings, 4 inches wider than the depth, 18 inches longer than the length of the openings, with hole sunk through the same for the flue, except the kitchen and other equally large openings, which are to be 4 inches thick.

The throats of the chimneys are to be gathered over from the jambs in the usual manner, and half-brick walls are to be built on these landings to form the flue from the top thereof until it joins the bottom of the chimney throat.

The carving will be done under the exclusive control and management of the Architect, and the cost is not to be included in this contract; but the Contractor will have to square the stone in the same manner as if the carving were part of his contract, and he must allow the use of his scaffold, &c., for the use of the carver when required.

The Contractor must provide for the security of the masonry from all damage; and all injury, that it may sustain during the construction of the building, from whatever cause it may arise, must be repaired to the satisfaction of the Architect, so that it may be delivered up in a complete state when the building is finished.

The metal frames, which are intended to be inserted in the stone mullions of the windows, are not to form any part of the present contract, except that the grooves for the same are to be formed.

The Contractor must also include the expense of cutting holes in the stone for fixing all ironwork, and any other purposes required for the execution of the works generally.

All projecting cornices, strings, &c., are to have water joints run with lead.

All proper plugs, cramps, &c., to be used to the extent hereinbefore provided.

Cut grooves for lead flashings in stone parapets.

PLUMBER.

All the gutters are to be formed as shown by the drawings, &c., lined with cast lead weighing 8lbs. to the foot superficial, laid to a current of 2 inches to 10 feet, with drips 2 inches high. The lead to turn up to the top of the gutters on each side.

An apron-piece of 8lbs. lead to be fixed on the side next the parapet, and turned up against them 6 inches, and dressed over the edge of the gutter 2 inches.

A similar apron-piece on the opposite side of the gutter of 6lbs.

lead (milled), to turn up under the slates 9 inches, and dressed down over the side of the gutter 2 inches.

Put lead flashing, 6lbs. to the foot, round the parapets, turrets, pinnacle, shafts, gables, &c., 6 inches wide; those to the gables 16 inches wide, securely wedged into the stonework with lead wedges, and pointed with cement.

The ridges are to be 2 feet wide, and the valleys 2 feet 6 inches wide, of 7lbs. lead.

All the cesspools in the gutters are to be as wide as the gutters, 2 feet 6 inches long, 6 inches deeper than the gutters; but the lead at the sides is to turn up as high as the gutter adjoining; solder it into the same; socket pipes 6 inches diameter.

To all the drips and cesspools the lower lead is to lay in a rebate 1½ inch wide formed in the boards, and all passings to be at least 6 inches.

The flats are to be covered with 8lbs. lead, to be carefully dressed round the wood rolls, 2 feet 6 inches apart, with all proper laps, nails, screws, &c., complete, and turn up 6 inches against the parapets.

Put 6lbs. lead flashing round the same where required.

The lead to the dormers to be 7lbs.

58 feet run semi-eaves gutter, 5 inches diameter, of 18oz. copper, with stout wire edges and copper band, is to be fixed, where shown, on strong iron brackets.

The rain-water pipes are to be square, of cast iron, as follows:—

400 feet run, 4½ inches square in the clear, including fixing.
2000 ditto 6 ditto ditto.
500 ditto 8 ditto ditto.

Number 26 ornamental heads to 4½ pipe, including fixing, 35*s.* each.
30 ditto 6 ditto 40*s.* „
6 ditto 8 ditto 40*s.* „
26 cast-iron shoes to 4½ pipe.
30 ditto 6 „
6 ditto 8 „
607 bearings and collars to junction of pipes, including cutting away and letting into stone, and running with lead, 5*s.* each.

All the lead must be cast of the best Newcastle lead, marked WB.

The flashings to be milled.

It will be required that all the lead shall be cast from the pig in the presence of the Architect, or some person appointed by him for that purpose.

SLATER.

The roofs are to be covered with the best Westmorland or Cumberland slates, of a light greyish green colour, secured with three copper nails to each slate, cut close to all ridges, dormers, chimney shafts and gables; the slates to be so laid, that every third slate shall lap over every first slate at least three inches, and the eaves to be laid double.

SMITH AND FOUNDER.

All the cast-iron work must be of perfectly sound and smooth castings, correctly placed, bedded and run with lead at their respective proper levels.

All the castings are to be made at some foundry in London approved by the Architect, and are to be placed in the stove-room and heated to a high temperature, in which state they are to be covered with linseed oil, which is to be well rubbed in.

All the wrought-iron work is to be of the best English iron, and the quality and strength of every article, particularly of the castings, must be submitted in the presence of the Architect, or some person appointed by him, to a full proof, at the expense of the Contractor, before it is removed from the foundry.

All defective castings or other work found upon trial to be insufficient from bad workmanship or material, are to be immediately replaced, and all the cast-iron work is to be further secured from rust by one coat of lithic paint, when delivered on the works, and all the wrought-iron by three coats of oil.

All the straps, bolts, &c., shown on the drawings, or otherwise described, are to be provided, as also 25 tons of cast-iron in corbels, weighing from 25lbs. to 50lbs. each, which are also to be fixed, for the wall plates, sills of partitions, and other timbers of the building.

Provide 20 tons of cast-iron in girders, &c., beyond what is shown on the drawings, including the requisite moulds to be used where directed, including 300 yards superficial of lithic paint.

Provide 10 tons of wrought-iron in bolts, straps, ties, &c., beyond what are shown on the drawings, to be used where directed, including 250 yards superficial of painting three times in oil.

Provide and fix an ornamental cast-iron trellis grating, each foot superficial weighing 20lbs., to be dropped into rebates over all the gutters, and to be cast in lengths of 3 feet, soaked in linseed oil as before described, and paint the same three times over with the best white lead and oil colour.

Provide and fix a cast-iron ornamental ridge to the several roofs, oiled and painted as before described, value 4s. per foot run prime cost, including fixing, but exclusive of oiling and painting three oils.

MESSRS. GRISSELL & PETO'S TENDER, NEW HOUSES OF PARLIAMENT.

ESTIMATE CONTRACT, No. 3.

SUMMARY.

No.		£	s.	d.	£	s.	d.
$1^{c.}$	Guernsey granite to fronts	4,991	0	0			
$1^{a.}$	Aberdeen, ditto	5,502	0	0			
1.	Fogging Tor, ditto	4,584	0	0			
$1^{b.}$	Penryn, ditto	4,177	0	0			
	Total	£19,254	0	0			
	Average amount of granite to the river fronts, one-fourth of the above				4,813	0	0
$2^{c.}$	Guernsey granite to courts	804	0	0			
$2^{d.}$	Aberdeen, ditto	874	0	0			
2.	Fogging Tor, ditto	738	0	0			
$2^{b.}$	Penryn, ditto	675	0	0			
	Total	£3,091	0	0			
	Average amount of granite to the internal courts, one-fourth of the above				772	0	0
3.	Portland stone, fine chiselled	54,695	0	0			
	Ditto rubbed	52,350	0	0			
4.	Darley Dale, fine chiselled	62,910	0	0			
	Ditto, rubbed	61,427	0	0			
5.	Bolsover, fine chiselled	59,840	0	0			
	Ditto, rubbed	57,447	0	0			
6.	Anston, fine chiselled	61,073	0	0			
	Ditto, rubbed	59,585	0	0			
7.	Steetley, fine chiselled	48,842	0	0			
	Ditto, rubbed	47,278	0	0			
	Total	£565,447	0	0			
	Average amount of Mason's work to the river fronts, one-tenth of the above				56,544	0	0
	Carried forward				£62,129	0	0

		£	s.	d.	£	s.	d.
	Brought forward				62,129	0	0
8.	Haydor, fine chiselled	22,780	0	0			
	Ditto, rubbed	22,110	0	0			
9.	Mansfield, fine chiselled	28,063	0	0			
	Ditto, rubbed	26,788	0	0			
10.	Steetley, fine chiselled	20,223	0	0			
	Ditto, rubbed	19,532	0	0			
	Total	£139,496	0	0			
	Average amount of Mason's work to the internal courts, one-sixth of the above				23,249	0	0
11.	Steetley, fine chiselled	11,888	0	0			
	Ditto, rubbed	11,538	0	0			
12.	Haydor, fine chiselled	13,436	0	0			
	Ditto, rubbed	13,086	0	0			
	Total	£49,948	0	0			
	Average amount of interior masonry, one-fourth of the above				12,487	0	0
13.	Other masonry				4,304	0	0
14.	Bricklayer				36,374	0	0
15.	Slater				1,150	0	0
16.	Carpenter				6,923	0	0
16ª.	Ditto, centering, &c.				1,360	0	0
17.	Founder and Smith				5,738	0	0
18.	Plumber				5,850	0	0
19.	Painter				154	0	0
	Average total				£159,718	0	0

26 September, 1839.

My Lord and Gentlemen,—We are willing to perform the several works intended to be executed in erecting the carcase of the river front, and the north and south flanks of the intended New Houses of Parliament, according to the several plans, elevations, sections, specifications, and conditions of contract submitted to us by Charles Barry, Esquire, Architect, and to his satisfaction, at the several amounts specified in the foregoing summary.

We have, &c. GRISSELL & PETO.

The Commissioners of Woods, &c.

Specification of Works to be performed and Materials used in forming the Foundations of a Portion of the South Flank of the Building, the Royal Staircase and adjoining Rooms, the House of Lords and its Appurtenances, the Public Corridors, and Central Hall, and the House of Commons and its Appurtenances. Charles Barry, Architect. 9th December, 1840.

EXCAVATION.

Excavate the ground to the several depths that may be considered necessary, and take up and remove all old walls, foundations and other obstructions that may be met with, subject to the directions of the Architect. The excavated soil and other materials are to be removed from the site, except such portions thereof as may be required for filling in and ramming between the walls, and backing of same to the banks as they are carried up.

Shore up and otherwise support, in the most effectual manner, any of the surrounding buildings, fences, sewers, drains, &c., that may be endangered by the excavation, and provide and fix all requisite struttings to support the banks. Provide and employ all requisite pumps, stages, troughs, &c., necessary for removing the water from the excavation, as well as all tools, implements, and other things requisite for executing the work in the best and most workmanlike manner.

The Contractors are to be answerable for any loss or injury that may occur to the adjoining premises or buildings, or to utensils or materials on the ground, from any circumstance connected with their work, or by robbery or otherwise.

Concrete.—The whole area of the excavation, when levelled to its proper depth, is to be covered with a bed of concrete, of such thickness as will be directed, composed of six measures of gravel or clean ballast to one equal measure of fresh-ground Dorking lime, mixed dry, and then well worked together with water, and in that state teemed and thrown into the work from a height of at least 10 feet, as will be directed: the surface is to be made perfectly level for the brick foundations, which are to be carried up thereon.

Brickwork.—The *foundation-walls* of the several parts of the edifice before mentioned are to be carried up, as will be directed, with sound, hard, well-burnt square stocks, laid with a close joint in English bond, in four courses, exceeding 11¾ inches, the filling-in bricks to be drawn up in the mortar, so that all the joints shall be well flushed up; every second or stretching course to be grouted in, if required.

The *mortar* is to consist of the best fresh-burnt Merstham or Dorking lime, and clean sharp river sand, in the proportion of three measures of sand to one equal measure of lime, well compounded together in a proper pug-mill. The lime is to be kept in an enclosed shed, and the supply to be duly regulated by the quantity of work in hand, so that the same may be used in a fresh state; and no more mortar is to be made up than is required for the day's consumption.

Any *relics of antiquity* that may be found in the progress of the work are not to be considered the property either of the Contractors or the workmen, but must be delivered from time to time, as soon as found, to the Architect.

The whole of the work is to be done in the best and most workmanlike manner, to the entire satisfaction of the Architect, and in all respects according to his directions.

Payments will be made at the rate of 85 per cent. of the value of the work from time to time executed, in sums not less than 3000*l.*, and the balance will be paid within two months of the completion of the work.

Schedule of Prices above referred to.

Digging and disposal of material, at 2*s.* 11*d.* per cube yard.

Concrete of gravel and lime, of the proportion stated, at 4*s.* 9*d.* per cube yard.

Brickwork in mortar, at 11*l.* 5*s.* per rod.

Westminster, 14 June, 1842.

Sir,—As I hope to have the whole of the work, included in Contract No. 4 for the New Houses of Parliament, completed in the course of a month or five weeks, it is desirable, in order to avoid loss of time, that arrangements should be immediately made for proceeding with the works of the superstructure above the foundations comprised in that Contract.

I send a small block plan to illustrate the extent of the work which I propose should be included in a new Contract, No. 5, for the carcase of a portion of the Victoria Tower to the height of 83 feet, the completion of the south front, including the Guard-room, and the Queen's Robing-room, the Royal staircase, the Royal gallery, the House of Lords, and its adjoining lobbies and corridors, the Peers' Refreshment-rooms, and a portion of their offices and Officers' rooms, a portion of the Central Tower to the height of 86 feet. The House of Commons, with its lobbies and connecting corridors, its Refreshment-rooms, and a portion of its offices and Officers' rooms, and also a portion of the Clock tower, to the height of 85 feet, the cost of which I estimate, upon the calculations of the existing Contracts, at the sum of 212,249*l.*

With respect to the mode of executing this work, I would beg to observe, that as the public has already had the benefit of a sharply contested competition for the work included in Contract No. 3, which has been accordingly undertaken by Messrs. Grissell and Peto at a very low calculation, and as their method of conducting as well as executing the work entrusted to them merits my warmest approbation, I beg to submit, as, in my opinion, the wisest and most economical course, that if Messrs. Grissell and Peto should be willing to undertake the work proposed to be included in Contract No. 5 upon the same terms and conditions as those of their present contract, it should be let to them, upon the understanding, that the work should be measured as it is proceeded with, and paid for quarterly, after deducting the same per centage, which is required in their present Contract, as a security for the due and proper execution of their obligations.

I am further induced to recommend that the work should be placed in Messrs. Grissell and Peto's hands, from a desire to avoid the confusion and difficulties, that would inevitably ensue from the introduction of another contractor and another distinct body of workmen, while the work comprised in Contract No. 3 is in hand, and also from a conviction that they would be able, owing to the great extent of their arrangements, both at the Quarries, and at the Building, to do the work more economically, as well as more effectually, than a stranger, and in so doing, would have the opportunity of relieving themselves to a certain extent of the burdensome cost of their preparatory arrangements, which their liberality and praiseworthy exertions have entailed upon them, by having a scope of work, the profit upon which, although small, will, as the arrangements need not be proportionally increased, cause that expense to be less felt.

The time that would probably be required to execute the work in contemplation, would, in my opinion, be about two and a quarter years from the period of its commencement.

A. Milne, Esq. I have, &c. CHARLES BARRY.

SPECIFICATION of sundry Works required in erecting the Carcase of a portion of the New Houses of Parliament, comprising the lower part of the Victoria Tower to the height of 83 feet; the completion of the South Front, including the Guard-room, and the Queen's Robing-room, the Royal Staircase, the Royal Gallery, the House of Lords, and its adjoining Lobbies, and Corridors, the Peers' Refreshment-rooms, and a portion of their Offices and Officers' Rooms, a portion of the Central Tower, to the height of 86 feet; the House of Commons, with its Lobbies and connecting Corridors, its Refreshment-rooms, and a portion of its Offices and Officers' Rooms, and also a portion of the Clock Tower, to the height of 85 feet, as shown by the block plan annexed, and according to such plans and elevations, sections, detailed drawings, and instructions, as shall from time to time be prepared and given for the purpose by CHARLES BARRY, or other the Architect for the time being of the Commissioners of Her Majesty's Woods, Forests, Land Revenues, Works, and Buildings.

The portion of the building included in the present Contract is shown by the block plan hereunto annexed, and is thereon coloured red; the roofs and their appurtenances, the metal terminals of the pinnacles, the window-frames, sashes, and glazing, and the carving of the masonry, are not included in this Contract.

The walls of the building within the limits of the proposed Contract being brought up to the level of 2 feet 3 inches above high-water mark, according to the Trinity standard of one thousand eight hundred, which is marked in the centre archway of Westminster Bridge, is to be considered the datum for the commencement of the works included in the present Contract.

All superfluous earth and rubbish is to be carried away from time to time during the progress of and at the completion of the works.

BRICKLAYER.

Materials.—The backing of the masonry and the whole of the internal *brickwork* is to be done with the best hard well-burnt sound stock bricks, laid in *mortar* composed of the best Dorking, Merstham, or other equal and approved stone lime, and clean sharp river-sand, free from all filth and impurities, well mixed together in the proportions of two equal measures of sand to one equal measure of lime, ground and tempered in a pug or horse-mill until it becomes of an equal and proper consistency.

The *lime* is to be thoroughly and freshly burnt, and must be kept in an enclosed shed, and no more mortar is to be made up at one time than is sufficient for each day's consumption.

Work.—The *bricks* are to be laid with a close joint properly bonded and well flushed up solid with mortar, and the filling-in bricks are to be rubbed in and drawn together, so as to make each joint flush and full of mortar, or otherwise grouted, if directed.

The whole of the *brickwork* in external as well as internal walls is to be brought up level at the top of every course of the external stone ashlar, and none of the bedding joints of mortar to exceed a quarter of an inch in thickness, and the bricks to be used in a humid state ; *tiers of hoop-iron* well pitched and sanded to be laid in the walls as will be directed ; the whole to be so arranged as not to interfere with any of the air and smoke flues within the several walls.

The backs of the stone parapets to be rendered with the best Roman or other approved cement as directed, properly jointed with the flashings.

Brick *discharging arches* to be turned over all openings of doors and windows ; where the height will admit, to be turned in three half-brick rings.

Such parts of the brickwork or arches as may be directed are to be done in best Roman cement.

All the *Roman cement* is to be composed of one measure of the best ground Roman cement that can be procured, mixed with one equal measure of clean sharp sand, to be well chafed up for use in small quantities, and used immediately.

The *fire-proof arches* to be turned in 9-inch work with sound hard stocks ; those which form the abutment on the iron bearers are to be cut or made to the form given by the radius of curvature.

The *spandrels* of these arches, and over the whole surface 3 inches above them, are to be covered with brickwork.

All splays, skewbacks, and other cuttings, to be carefully formed wherever they may be required or directed.

The whole of the walls of the building are to be carried up together, and are to be made level throughout from time to time at least every 6 feet in height.

The thin walls, or such as are not carried up to the full height of the building, to be worked at their junction with the main or thicker walls into a chase or indent, if directed.

The whole of the walls to be effectually covered from time to time with boards, or otherwise whenever the Architect shall direct.

The fire-proof arches are not to be built until the building is covered in; and projecting corbel courses, properly cut to the required radius, must be left to receive them wherever necessary.

Cast-iron and other corbels to be inserted where required; and all plates, templates, corbels, to be properly bedded wherever directed.

Good and sufficient *scaffolding* is to be provided for the whole of the brickwork, and is not to be struck until directed by the Architect.

Provide for two gatekeepers and two watchmen during the execution of the works; provide and keep in repair two boxes for the same.

The soffits of the brick vaulting and fire-proof arches in the repositories are to be stopped and neatly pointed after the centering is struck.

All the lead flashings to be carefully pointed with Roman cement; rings for smoke-jacks 2 feet 2 inches diameter to be provided and fixed as will be directed.

All flues to be properly formed, and, wherever requisite, with York covers, and to be properly pargetted or stuccoed, as may be directed; the whole of the flues to be thoroughly cored and made good upon completion.

All District Surveyors' and other fees to be paid by the Contractors.

CARPENTER.

Materials.—The whole of the *timbers* to be used are to be of the best Baltic wood, free from large or loose knots, shakes and wains; and all the *oak* that is required is to be of English growth, thoroughly seasoned, and of the best description.

All wood lintels that may be directed are to serve as turning pieces for relieving arches in brickwork; all framing, scarfing, and notching, to be executed as will be directed; all wood plates for floor joists and other bearing timbers to be bolted through the cast-iron corbel plates, that will be inserted in the walls to receive them.

All rods, moulds, trammels, levels, which may be required by the respective workmen employed, are to be provided. All proper *centering* to arches and apertures, that may be required, are to be provided and securely fixed, and are not to be removed until directed by the Architect.

All temporary stays and braces to the walls of the building are to be fixed and removed by the Contractors, who are to be allowed the use and waste of timber for the same.

The office now on the ground for the Clerk of the Works to remain during the execution of the present Contract.

MASON.

Materials.—The external walls of the buildings, and all such parts thereof as may be seen from any point of view externally, are to be faced with Norfal stone, obtained from a quarry now in work for the stone of the exterior of the river-front, near Anston, in the county of York, of the very best quality, and of uniform colour, free from all loose vents, holes, and all other defects.

The *stone* for the facing and decorations of the interior is to be either from Painswick, in Gloucestershire, or from Caen, in Normandy, or such other stone as may be selected by the Architect, and to be perfectly free from all defects whatever.

Work.—The whole of the face of the external and internal masonry to be fine random chiselled, according to a sample, to be approved by the Architect. The plain work in all cases to be true and out of winding, and the mouldings carefully worked, to procure their true form and arrisses. The beds and joints to be rough chiselled, or pointed, fair, and out of winding, and to be sunk or notched wherever necessary, for the efficiency and solidity of the work. The backs of ashlar and dressings which bond with the brickwork, to be rough chiselled or pointed to a regular face, true and out of winding. Every stone to hold its full length and height, square to the back, and to be secured to the brickwork of the backing, with cramps whenever it may be directed. The vertical and other joints of the masonry, generally, are to be jiggled, plugged, or dowelled, as will be directed; and every attention is to be paid to the bonding of the work in the most perfect manner.

The Contractors are to provide and fix all York templates required, all covers for smoke flues, and all requisite stone-springers for brick arches, according to the directions that will be given for those purposes.

All the chimney openings to have 3-inch tooled Yorkshire landings, 4 inches wider than the depth, and 18 inches longer than the length of the openings, with holes sunk through the same for the flue, except kitchen and other equally large openings, which are to have similar stones 4 inches thick. The throats of the chimneys to be gathered according to the drawings to be furnished.

The *carving* will be done under the exclusive control and management of the Architect; but the Contractors are to prepare and bost out the stone for the same in the same manner as if the carving was part of their contract, and to allow the use of their scaffolding for the carver when and where required.

The Contractors are to cut all holes for fixing iron-work, or any other purposes required for the execution of the works generally. All projecting cornices and strings are to have water-joints run with lead, and the stone parapets are to have proper grooves cut for lead or other flashings.

All scaffolding, machinery, tackle, tools and implements that may be required for the due and proper execution of the works are to be provided by the Contractor.

All lead which may be required is to be of the best refined Newcastle lead, marked W.B.

SLATER.

The *roofs* are to be covered with the best *Westmorland or Cumberland slates*, of a light greyish green colour, secured with 3 *copper nails* to each slate, cut close to all ridges, dormers, chimney-shafts and gables; the slates to be so laid that every third slate shall lap over every first slate at least 3 inches; and the *eaves* to be laid double.

SMITH AND FOUNDER.

All the *cast-iron work* must be of perfectly sound and smooth castings, correctly placed, beaded and run with lead at their respective and proper levels. All the castings are to be made at a foundry to be approved by the Architect, and are to be placed in the stove room, and heated to a high temperature, in which state they are to be covered with linseed oil, which is to be well rubbed in.

All the *wrought-iron* to be of the best English iron, and the quality and strength of every article, particularly the castings, must be submitted in the presence of the Architect, or some person appointed by him, to a full proof at the expense of the Contractors before it is removed from the foundry.

All *defective castings* or other work found upon trial to be insufficient from bad workmanship or material, are to be immediately replaced; and all the cast-iron work is to be further secured from rust by one coat of *lithic paint* when delivered on the works, and all the wrought-iron three times in oil.

All the straps and bolts shown on the drawings to be furnished or otherwise described, are to be provided; also all such cast-iron corbels as may be requisite, which are also to be fixed for the wall plates, sills of partitions, and other timbers of the building.

Mode of Measurement referred to in and by the foregoing Contract.

MASON'S WORK.

Cube Stone.—If square, to be measured the net size when worked; but where the stone is not of a square form, to be measured to the size of a square stone of the least extent required. Where the stones are of scantling lengths of six feet or upwards, to be measured separately from the ordinary cube stone.

Drafted Backs.—The backs of the stones where drafted to be measured according to the surface actually shown.

Plain and Sunk Beds.—One plain bed only to be taken for each stone, except to mullions of windows, for which two beds are to be taken to each stone. Ordinary arch stones to be considered as having one plain bed and one sunk bed.

Plain and Sunk Joints.—Not more than one plain joint to be taken for each stone having one or more plain joints. All sunk joints to be taken as they occur.

Chiselled or Rubbed Faces.—To be measured to the size actually shown on the external surface.

Rough Sunk.—To be taken when a large quantity of stone has to be removed, as in stop mouldings to sills, window heads, and other similar work.

Sunk, Chiselled or Rubbed Faces.—To be measured on the surface actually worked, adding the depth of the sinking.

Stopped Sinking.—To be measured in such situations as do not permit the work to be carried straight through the stone, as in sills of windows and other similar work.

Preparatory Labour or Plain Face as Bed.—To be taken wherever it is necessary to produce a face for the purpose of setting out underwork, as in tracery heads and other similar works. This is also intended to apply to mullions of windows, one side and one edge of which are to be taken plain as bed.

Sunk, Chiselled or Rubbed Face in Short Lengths to Hexagonal Canopies.—To be measured as they occur, including arrisses.

Mouldings.—To be girthed the surface actually shown; the top bed, if weathered, only to be measured as sunk face.

Mouldings to Panellings.—To be girthed, including the back of the panels.

Circular Face to Soffit of Cusps.—To be measured the whole thickness of the stone from back to front.

Circular Face to Soffit of Cusps in Panelling.—To be measured from the external face of the stone to the face of the panelling.

Sunk Faces to Tracery Heads of Panelling.—To be measured net on the face, adding the depth of the sinking from the external face.

Sunk Face in Margins for Eyes.—To be measured the extreme length and width.

Circular Sunk to Rebated Soffit of Cusps.—To be measured from the external surface, adding the depth of the rebate.

Mouldings in Tracery.—The extreme lengths of the straight mouldings in the tracery of the window-heads to be measured through the mitres and junctions with other mouldings.

Throat.—To be measured per foot run.

Groove for Cement.—To be measured per foot run.

Groove for Metal Sashes.—To be measured per foot run.

Rebate not exceeding Three Inches Girt.—To be measured per foot run.

Mitres to Sinkings.—To be numbered according to width.

Mitres and Returns to Sinkings.—To be numbered according to the width of the sinking and length of the return.

Mitres to Mouldings.—To be numbered according to the girt of the moulding.

Mitres to long Intersections of Cusped and other Mouldings.—To be numbered according to the girt of the moulding and length of run.

Stopped Ends of Mouldings.—To be numbered according to girt of moulding.

Stopped Ends of Mouldings on Splayed Sills and Sills of Panels.—To be numbered according to the girt of moulding and extreme length from top of sill to point of intersection.

Rough Sinkings for Cusped Window Heads and similar Sinkings.—To be numbered, taking the average area of the sinking and the full thickness of the stone.

Holes Punched.—To be numbered according to their area and depth.

Sinkings to form Shingles.—To be numbered as they occur, according to length, width, and depth of sinking.

Notchings to form Embrasures.—To be numbered according to their height, width, and depth of sinking.

Water Joints.—To be numbered according to their projection.

Mitres to Soffits of Cusps in Tracery Heads of Windows.—To be numbered according to their length, and taken the full thickness of the stone.

Mitres to Soffits of Cusps in small Tracery Heads of Panelling. —To be numbered according to their length, measured from external face of stone to back of panelling.

Points to Cusps in Tracery Heads of Windows.—To be numbered according to their length, and measured the whole thickness between the sunk faces.

Points to Cusps in small Tracery Heads of Panelling.—To be numbered according to their depth from sunk face to back of panelling.

Sunk and moulded Œilets, each with one Mitre and two long Intersections.—To be numbered according to extreme size.

Small Sunk Eyes.—To be numbered.

Cramps out of Saw Plate.—To be numbered according to length.

Cast-iron Cramps.—To be numbered according to length and thickness.

Plugs.—To be numbered according to length and size.

Small Copper Joggles and Mortices.—To be numbered.

Stone Joggles and Mortices.—To be numbered.

Joggles to Vertical Joints with Pebbles in Cement.—To be numbered according to size.

Paving and Landings.—To be measured per foot superficial.

Perforations to Landings.—To be numbered according to size and the thickness of the stone.

BRICKLAYER'S WORK.

The brickwork to be measured according to the number of bricks in the thickness of each wall, deducting all openings, except pargetted flues.

Cutting.—To be allowed for skewbacks of arches and surface cutting, but no cutting to be allowed for the interior of arches, excepting circular groined arches.

Pointing to Soffits of Arches and Lime Whiting.—To be measured per foot superficial.

Cement to Back of Parapets.—To be measured on the surface per yard superficial.

Rough Splay.—To be measured per foot run where it occurs.

Groin Points.—To be measured per foot run.

Pointing to Lead Flashings.—To be measured per foot run.

Iron Hooping.—To be measured per yard run the quantity actually used.

CARPENTER'S WORK.

All framed timbers to be measured cube; the net quantity used in the work, fir or oak, in plates, corbels, and lintels, to be measured separately.

Battening for Slating.—To be measured on the surface of the roof per square.

Boarding for Lead.—To be measured on the surface per foot superficial.

Valley and Eaves, Boards, Gutters, and Bearers, and Boarding to sides of Gutters.—To be measured per foot superficial.

Labour to Rounding Ridges and Labour to Rebates.—To be measured per foot run.

Labour to Splayed or Bevelled Edge of Joist.—To be measured per foot run.

Tilting Fillets and Rolls for Lead.—To be measured per foot run.

Rebated Drips, Rounded Ends to Rolls, Short Rounded Rolls, and Dovetailed Cesspools.—To be numbered.

Timber prepared in Kyan's Tank, including carriage to and from.—To be measured at per load.

Fixing Bolts, Straps, and Cast-iron Heads.—To be numbered.

Fixing Cast-iron Work.—To be included in the price of the same by weight.

Wrought-iron provided for Bolts, Straps, &c.—To be charged according to the weight actually used.

Centering to Brick Arches.—The quantity to be measured on the soffit of the arch at per square.

Flewing Centering to Pointed Apertures.—To be measured per foot superficial.

Centering to Stone Arches.—To be measured on the soffit of the arch at per square.

SMITH AND FOUNDER'S WORK.

Cast-iron Work.—To be provided, proved and fixed complete at per cwt., including patterns.

Wrought-iron Bolts, Straps and Ties.—To be provided ready for fixing at per cwt.

Linseed Oil Rubbed into Girders.—To be measured at per yard superficial.

SLATER'S WORK.

Slating.—To be measured on the surface at per square, allowing one foot for eaves, one foot for each valley and hip, and six inches for cutting to sides of dormers.

PLUMBER'S WORK.

Lead.—To be provided and laid by weight, which weight is to be ascertained by admeasurement when the work is completed, the weight per foot superficial being previously ascertained in the sheet.

Soldered Angles.—To be measured per foot run.

Dots, Lead Plugs, Lead Wedges and Socket Pipes to Cesspools.—To be numbered.

Cast-iron Rain Pipes.—To be measured per foot run.

Cast-iron Heads and Shoes.—To be numbered.

Bearings and Collars.—To be numbered.

Eaves Gutter.—To be measured per foot run.

PAINTER'S WORK.

Painting to Cast-iron Work.—To be measured per yard superficial.

Painting to Straps, Bolts, &c.—To be measured per foot run.

Painting Bolts and Heads to Trusses.—To be numbered.

CONTRACT, No. 7.

For the Internal Finishings of the Building generally.

Office of Woods, &c., 21 December, 1844.

My Lords,—By a letter from Mr. Barry, dated the 22nd ultimo, we are informed that he is now prepared to proceed with the finishings of the New Houses of Parliament, and he recommends that the whole of the ordinary works for the completion of the interior of that building be contracted for at prices founded upon the schedule according to which contracts are entered into for Government works in this department, but suggesting that, in consideration of the extent of work required, and the consequent opportunity of effecting a saving in labour by the aid of machinery and otherwise, a considerable reduction be made in the proposed Contract from the prices in our official schedules; and Mr. Barry recommends, that if the present contractors, Messrs. Grissell & Peto, be disposed to accede to such terms as shall be deemed satisfactory, a contract should be entered into with them, in preference to other tradesmen, who are strangers to the work, and the various arrangements hitherto made for conducting it. With respect to the Joiner's work, of which there will be a great extent in finishing the New Houses of Parliament, Mr. Barry adds a special recommendation, on the ground that a very great saving may be made both in time and cost by the employment of a newly invented machine, which, in preparing mouldings and wood carvings, he considers to afford extraordinary advantages over hand labour; and, in the event of this last-mentioned suggestion being adopted, Mr. Barry recommends, that extensive and commodious premises, not far from the Houses of Parliament, should be taken on lease by us, to be used as workshops, in which the various operations connected with the Joiner's work may be carried on together.

After having very maturely considered and discussed with Mr. Barry the subject of these proposed arrangements, and being of opinion that there would be many advantages in adopting the principle of his recommendation, if Messrs. Grissell & Peto should be willing to agree to such prices for works and materials in all the different branches of trades, as compared with those obtained by us by extensive competition for similar services in our department, we could recommend your lordships to sanction, we authorized Mr. Barry to negotiate with Messrs. Grissell & Peto, and when he had done so, to make a further report to us of the result of his negotiation; and accordingly, on the 2nd instant, he informed us, that, in compliance with our instructions, he had applied to Messrs. Grissell & Peto for a tender for carrying into effect all the ordinary works required for the finishings of the Houses of Parliament, and that he had received such tender, of which the following is a copy:—

"York Road, Lambeth, 30 November, 1844.

"Sir,—In reply to your application, we beg to acquaint you, that we are willing to undertake the ordinary works required in the finishings of the New Palace at Westminster at the undermentioned per centages in abatement of the official Schedules of Prices of the department of Her Majesty's Woods and Works:

"Carpenter's and Joiner's work	22	per cent.
"Bricklayer's works	15	"
"Mason's works	18	"
"Plumber's works	14	"
"Slater's works	17	"
"Plasterer's works	12	"
"Painter's works	10	"
"Glazier's works	20	"
"Smith's works	22	"
"Ironmonger's works	33½	"
"Pavior's and Labourer's works	12½	"

"The wainscot to be used in the Joiner's work is assumed to be from the best Crown Riga wainscot in the logs, and from pipe-staves of the best quality, in equal proportions, to be prepared for use by steaming or otherwise.

"Any works or materials not included in the schedule of prices, or differing in description from the above, to be the subject of special agreement either with ourselves or others, at your option.

"The contract to remain in force for the period of three years, unless determined earlier, at the option of either party, upon giving six months' notice.

"Payments to be made quarterly, or on account, as in No. 5 Contract.

"Charles Barry, Esq." "GRISSELL & PETO.

And Mr. Barry adds, that these terms are such, as on a close examination, he can with confidence recommend; that they are extremely moderate, and in his opinion below the amount at which any other respectable and competent building firms in London would be inclined to propose, and that he has no hesitation in stating that the public interest would be best promoted by placing the Contract in the hands of Messrs. Grissell & Peto.

In thus submitting to your lordships the result of our communications with Mr. Barry on this very important subject, it will not escape the observation of your lordships, that Messrs. Grissell & Peto, having executed all the works already performed at the Houses of Parliament (with the exception of the embankment wall), and having an extensive, competent and well-organized establishment, thoroughly acquainted with the works, which up to this time we believe to have been executed in the best manner, and to the entire satisfaction of Mr. Barry, possess many advantages over any other contractors, who might now be applied to, and that the possession of those advantages may be regarded as having enabled Messrs. Grissell & Peto to offer the favourable terms hereto appended, which, under all the circumstances, we have no hesitation in recommending to your lordships to authorize us to accept.

In regard to a lease of premises to be used in executing the Joiner's work, as recommended by Mr. Barry, and above referred to, we shall submit a proposal to your lordships as soon as possible in another Report.

We are, &c. LINCOLN.
A. MILNE.
C. GORE.

The Right Hon. the Lords
Commissioners of Her Majesty's Treasury.

Memorandum of Agreement entered into on the 3rd of December, 1844, between Charles Barry, Architect, and Messrs. Grissell & Peto, Builders, as to the Conditions of the Contract of Messrs. Grissell & Peto for all ordinary Works required in the Finishings of the New Palace at Westminster, made upon the basis of the Office of Woods and Works' Prices, with certain Abatements therefrom.

First. That the wainscot is assumed to be from the log and pipe staves in equal quantities, the prime cost of which, in inch boards, seasoned by steam or other artificial means, so as to be fit for use, is calculated at 6½*d.* per foot superficial.

Secondly. That if it should be found necessary to make use of thoroughly dry wainscot boards for the whole or any portion of the Joiner's work, seasoned by natural means (viz. exposure to the atmosphere), the prime cost of such boards, with the addition of a profit of 7½ per cent., is to be allowed for them, over and above the price of 6½*d.* per foot superficial, the prime cost of wainscot boards provided for in the Contract as above stated.

Thirdly. That the values of the deal and wainscot works be two-thirds wainscot and one-third deal.

Fourthly. That the workshops and premises required for executing the Joiner's works, and the insurance thereof, be provided at the cost of the Government; and,

Fifthly. That should the Contract be determined at any period prior to the expiration of the term for which it is made, the Government is to take the whole stock, plant and machinery at a valuation.

CONTRACT, No. 8.

For the Internal Finishings of the Building generally.

Office of Woods, &c., 29 April, 1846.

My Lords,—By Mr. Trevelyan's letter, dated the 2nd of January, 1845, this Board received your lordships' authority to enter into a Contract (No. 7) with Messrs. Grissell and Peto for the ordinary works for the completion of the New Houses of Parliament at the under-mentioned per centages, in abatement of the official schedules of prices in our department of Works and Buildings:—

Carpenter's and Joiner's works	22 per cent.
Bricklayer's works	15 „
Mason's works	18 „
Plumber's works	14 „

Slater's works	17 per cent.
Plasterer's works	12 „
Painter's works	10 „
Glazier's works	20 „
Smith's works	22 „
Ironmonger's works	33½ „
Pavior's and Labourer's works . . .	12½ „

We have now to report to your lordships, that, by the agreement entered into pursuant to the before-mentioned authority, it was provided that the Contract was to remain in force for the period of three years unless determined earlier, at the option of either party.

Under that provision, Messrs. Grissell and Peto, on the 21st of October, 1845, gave notice to Mr. Barry, that the result of the proceedings in the execution of the Joiner's works for the New House of Peers, Libraries, and Offices connected therewith, had been so entirely unsatisfactory in point of remuneration, that they were obliged to notify their intention of terminating their engagement under that contract.

On the 20th ultimo, Mr. Barry transmitted Messrs. Grissell and Peto's letter to us, and stated that he had, after the receipt of that notice, and before making any report upon the subject, considered it to be his duty to make the most careful inquiry into the truth of the allegation, as to the loss set forth in that letter from Messrs. Grissell and Peto, and also to enter into minute and numerous calculations relative to the terms, upon which they might undertake the execution of the works in future, so as to insure to them a fair and reasonable profit; and that for this purpose, Mr. Barry had, at Messrs. Grissell and Peto's earnest invitation, had free access to the whole of their prime-cost accounts, and other private memoranda, by which, he states, he is enabled to confirm the truth of their allegations as to loss; and that he has also satisfied himself, by means of extensive admeasurements and valuations of the works executed, and by comparing the results with the actual cost, that the terms which he now proposes for the execution of the work in future, and which are hereinafter submitted to your lordships, will not yield a greater profit than between eight and nine per cent. on the prime cost, which, considering the nature of the work, and the risk and responsibilities consequent upon the performance of it, he considers to be not more than a reasonable remuneration. Under these circumstances, Mr. Barry, believing that it would be impossible to obtain an offer upon lower terms from any London builder of the standing and reputation of Messrs. Grissell and Co., is induced to recommend the adoption of the terms of the following discounts upon the official schedules of prices of the Office of Woods, &c., for the works in question, as the basis of a new contract with Messrs. Grissell and Co., the former partner, Mr. Peto, having recently retired from business.

Proposed Discounts upon the Official Schedules of Prices of the Office of Woods, &c., for the works to be comprised in the proposed Contract for the finishings of the New Houses of Parliament:—

Denomination of Trades.	Proposed Contract.	
Carpenter and Joiner (deal)	6 per cent. in abatement of the office schedule of prices.	
Ditto (wainscot) . .	10	"
Bricklayer . . .	10	"
Mason	18	"
Plumber	7½	"
Slater	10	"
Plasterer	12	"
Painter	nil	
Glazier	35	"
Ironmonger . . .	25	"
Smith	nil	
Pavior and Labourer .	12½	"
First-rate mechanics of all denominations at per day		5*s.* 9*d.*
Plumber's labourers		4*s.*
Other Labourers		3*s.* 6*d.*

Adverting to our report of the 21st December, 1844, recommending for your lordships' sanction the mode in which the finishings and works for completing the interior of the New Houses of Parliament should be proceeded with, it will be perceived that the grounds for that recommendation of the further Contract being placed in the hands of Messrs. Grissell and Peto, were the peculiar advantages which, as being the present Contractors, they must have over every other, by having executed all the preceding Contracts, except the first, and by being in possession of an extensive, competent, and well-organized establishment, thoroughly acquainted with the works; secondly, their having hitherto performed them, according to Mr. Barry's opinion, in the best manner and to his entire satisfaction; and, thirdly, their terms being extremely moderate. In addition to which, we have to add, that Mr. Barry's opinion of the fairness of the prices now proposed has been confirmed to us by that of Mr. Thomas Cubitt.

Considering, therefore, that, excepting in so far as a less discount will cause a greater cost, the same reasons as heretofore still remain for recommending for your lordships' sanction the terms now proposed as the basis of a Contract with Messrs. Grissell and Co. for the further works required for the finishings of the New Houses of Parliament, we request to be favoured with your lordships' directions for our proceeding accordingly.

We are, &c. CANNING.
A. MILNE.
C. GORE.

The Right Honourable the Lords
Commissioners of Her Majesty's Treasury.

Treasury Chambers, 5 May, 1846.

My Lord and Gentlemen,—Having laid before the Lords Commissioners of Her Majesty's Treasury your report, dated the 29th ultimo, stating that Messrs. Grissell and Peto have given notice to determine their existing Contract No. 7, for the interior finishings of the New Houses of Parliament, and submitting amended schedule of prices as the basis for forming a new Contract, and requesting authority to accept the terms proposed, I am commanded to convey to you their lordships' approval of the proposed arrangement of Contract prices, it being understood, of course, that the same power of altering the prices on notice as was reserved in the former Contract should be reserved also in the new Contract.

The Commissioners of Woods, &c. I have, &c. JOHN YOUNG.

Ramsgate, 22 October, 1846.

Sir,—With reference to the proposed new Contract for the finishings of the New Houses of Parliament, I beg to acquaint you that I have long since been prepared to report to the Board relative to the schedule of prices to be attached to it; but I have refrained from doing so pending the discussions, which have for some time past taken place with Messrs. Grissell, as to several conditions of that Contract to which they have objected. As I understand, that all differences between the Board and Messrs. Grissell relative to those conditions are now likely to be adjusted, I beg to enclose two schedules of prices for Joiner's works, marked (A) and (B), both of which are prepared upon the basis of allowing the Contractors a net profit of 8½ per cent. upon the prime cost of the work, in accordance with an understanding with them to that effect.

The Schedule marked (A) is in conformity with Messrs. Grissell's tender, which is founded partly upon the official list of contract prices of the Office of Woods, with an abatement from them of 6 per cent. upon deal and 10 per cent. upon wainscot work, and partly upon prices which I have affixed to such items as are not included in the office schedule, the latter forming the largest and by far the most important portion of the Contract. In order to allow the Contractors the net profit agreed upon, I have been obliged to affix much higher prices upon the items *not included* in the office schedule, than the value of the work will justify, owing to the deficiency in value of the items included in the office schedule, as compared with the real value of the work. As such a Schedule of Prices has not, therefore, any consistent reference to the real value of the work throughout, I have caused the Schedule (B) to be prepared upon the principle of setting aside the office schedule altogether, and making it throughout in accordance with the real value of the work, allowing in the aggregate the same amount of profit as is afforded by the prices of Schedule (A).

I beg, therefore, for the reasons stated, to recommend that Schedule (B) should be adopted as the basis of the proposed Contract in preference to Schedule (A).

For all other works the tender of Messrs. Grissell is proposed to be accepted in the shape in which it has been offered.

Alexander Milne, Esq. I have, &c. CHARLES BARRY.
&c. &c. &c.

Office of Woods, &c., 29 October, 1846.

Sir,—I am, on behalf of the Commissioners of Her Majesty's Woods, &c., to acknowledge your letter of the 22nd instant, transmitting two Schedules of Prices for Joiner's works marked (A) and (B); and, with reference to the remark of your having "been obliged to affix much higher prices upon the items *not included* in the office schedule than the value of the work will justify, owing to the deficiency in the value of the items *included* in the office schedule, as compared with the real value of the work," I am to observe, that the Board consider this to be an erroneous principle, and one which is liable to much misconstruction, and to request that you will transmit further explanation thereof for the satisfaction of the Board: it is also desirable that the Board be informed of the more specific application of the Schedules (A) and (B.), and of the office schedule, as connected with Messrs. Grissell & Peto's tenders to the particular Contracts, *i. e.* the first and the second for the "Finishings," and also for the "Ordinary Works," tendered for in the Contract numbered 7, for works done and remaining to be done in the completion of the New Palace at Westminster.

Charles Barry, Esq.
&c. &c. &c.

I am, &c. A. Milne.

Westminster, 4 November, 1846.

Sir,—I have to acknowledge the receipt of your letter of the 29th ultimo relative to the schedule of prices for the "Finishings" of the New Palace at Westminster, which was forwarded to you with my letter of the 22nd ultimo, and marked (A) and (B).

In reply, I beg to acquaint you, that I entirely agree with the Board in considering the principle of Schedule (A) to be erroneous, and one which is liable to misconstruction, and on that account precisely I have deemed it right to call attention of the Board to the discrepancies which it contains.

The prices of Schedules (A) and (B) will produce the same amount, when applied to any given extent of work, Schedule (A) being in conformity with the terms of Contract No. 7, which has not a proper relation to the value of the several descriptions of work executed, and Schedule (B) being proposed to supersede it for the purpose of removing all such discrepancies.

The terms of the Schedule (B) have been agreed to by Messrs. Grissell, upon the understanding that they are to apply to the whole of the work included in the first as well as in the proposed second Contract, for the whole or any portion of the "Finishings" of the New Palace at Westminster; and inasmuch as I am satisfied, that the prices proposed in that schedule will not yield more than a very moderate profit, I would recommend that they should be adopted as the basis of the proposed Contract No. 8, and made applicable to all work already done and proposed to be done in the completion of the New Palace at Westminster.

Alexander Milne, Esq.
&c. &c. &c.

I have, &c. Charles Barry.

METAL SASHES (SECOND CONTRACT).

(B.)

Westminster, 9 July, 1845.

Sir,—I have received tenders from Mr. Deville, of the Strand; Messrs. Barrow and Turner, of East Street, Manchester Square; Messrs. Bailey, of Holborn; and Messrs. Jones, Messenger, and Sons, of Birmingham, for a further portion of the metal sashes required for the New Houses of Parliament, beyond what is already contracted for, of which the enclosed is an abstract and comparative statement.

As Mr. Deville's tender, upon a comparison with the others, when applied to the proportions of the several kinds of work required, is the lowest, I beg to recommend that it should be accepted, and that if he should be willing, it should be made applicable to the whole of the metal sashes required throughout the building.

Alexr. Milne, Esq. I have, &c. CHARLES BARRY.

ABSTRACT OF TENDERS for Barrow and Turner's Patent Metal Sashes, according to Drawings and Specifications.

DESCRIPTION OF THE SEVERAL KINDS OF WORK REQUIRED.	TENDERS.			
	James Deville, exclusive of 2¼ per cent. for Patentees.	Messrs. Barrow and Turner, not subject to Conditions as to Delivery.	Messrs. Bailey, exclusive of 2¼ per cent. for Patentees.	Messrs. Jones, Messenger, and Sons, exclusive of 2¼ per cent. for Patentees.
	s. d.	s. d.	s. d.	s. d.
Fixed lights in windows of the House of Lords and lobbies, north and south of the House, at per foot superficial	7 3	...	11 8	...
Fixed lights in other portions of the building, in accordance with Drawing No. 2, but exclusive of hanging the ventilator	Heads measured square. 11 6	11 6	13 9	38 0
Hanging the ventilators with hook and spring, each	8 0	5 0	10 6	58 0
Lights, with the lower sash hung in accordance with Drawing No. 1, but exclusive of hanging ventilator, at per foot superficial	15 9	22 0	19 10	46 0
Hanging the ventilators with rod and knob complete, each	14 0	20 0	15 0	84 0
Hanging the sash with string brass-clock chain, instead of cord	Per foot superficial. 0 9	Per foot superficial. 0 2	Each. 15 0	Per foot run. 1 6
Hollow copper sashes, single hung, per foot superficial	17 6	25 0	15 0	46 0
Ratio of tenders when applied to the proportions of the several kinds of work required	2,892	3,231	3,446	9,178

9 July, 1845. CHARLES BARRY.

Westminster, 18 July, 1845.

Sir,—In reply to your letter of the 14th inst., containing the authority of the Board to accept Mr. Devill's tender for the metal sashes required for the New Houses of Parliament, upon the conditions therein stated, I beg to acquaint you, that the cost of the work to which such tender applies will be about 9,800*l.*

I have, &c.

A. Milne, Esq. CHARLES BARRY.

CONTRACT FOR GLASS AND GLAZING.

(C.)

Westminster, 29 July, 1845.

Sir,—I transmit to you enclosed an abstract of tenders, which I have received for the glass and glazing required in a portion of the New Houses of Parliament, the cost of which will not exceed 7000*l.* As it appears by this abstract, and a calculation, which I have made upon the relative quantities of the two descriptions of glass required, that Messrs. Ford and Son's tender is the lowest, and as they are, I understand, in an extensive way of business, particularly in connexion with Messrs. Baker and Sons, builders, and are willing to give ample security for the due performance of the Contract, I beg to recommend that their tender should be accepted.

I have, &c.

The Honourable Charles Gore,
&c. &c. &c. CHARLES BARRY.

ABSTRACT OF TENDERS received for Glass and Glazing, 24 July, 1845.

TENDERERS' NAMES.	Patent Plate, No. 2, as specified.	Ditto in Tracery Heads.	Patent Plate, No. 2, delivered in Store.	Plate Glass, including everything specified in Squares, as undermentioned.																							Plate in Tracery Heads, all sizes.	Ditto, delivered in Store.
				SUPERFICIAL.																								
				1 ft. 9 in.	2 ft.	3 ft.	4 ft. 6 in.	5 ft. 3 in.	5 ft. 9 in.	6 ft.	6 ft. 9 in.	7 ft.	7 ft. 3 in.	8 ft. 6 in.	9 ft.	9 ft. 3 in.	9 ft. 6 in.	10 ft.	10 ft. 6 in.	10 ft. 10 in.	11 ft.	11 ft. 6 in.	14 ft. 4 in.	18 ft.	22 ft. 8 in.	24 ft. 6 in.		
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1. John Foord and Sons, New Palace Road, Lambeth .	2 2½	2 6½	2 0½	2 8	2 9	3 6	4 3	4 6	4 6	4 8	5 1	5 1	5 3	5 6	5 7	5 8	5 8	5 9	5 11	6 0	6 1	6 4	7 3	8 5	9 8	9 11	3 9	3 7½
2. Messrs. Chater and Hayward, St. Dunstan's Hill .	2 3	2 6	2 0	2 6	2 9	3 0	4 6	5 0	5 0	5 0	5 6	5 6	5 6	6 0	6 0	6 0	6 0	6 5	6 5	6 5	6 5	6 10	7 10	9 0	10 5	10 10	3 0	2 10
3. Richard Cobbett and Son, Northumberland St., Strand	2 6	3 0	...	2 9½	2 10	3 5½	4 5	4 8½	4 10	4 10½	5 2½	5 3	5 5	5 8	5 8½	5 9	5 9½	5 11	6 0½	6 2½	6 3	6 5½	7 5½	8 6½	9 11½	10 9	add 6*d.* extra.	...
4. William Henry Tucker, 127, High Holborn . . .	2 7½	3 2	2 6	3 0	3 2	4 6	4 10	5 1	5 2	5 3	5 6	5 8	5 9	6 0	6 3	6 3	6 9	6 10	7 0	7 2	7 2	7 3	8 2	9 4	10 6	11 0	3 11	3 8
5. Philip Palmer, St. Martin's Lane .	2 8	2 8	2 6	3 0	3 0	3 10	4 6	5 0	5 0	5 3	5 6	5 6	5 6	6 0	6 3	6 3	6 3	6 3	6 6	6 6	6 6	7 0	8 0	9 0	10 6	11 6	3 6	6 0
6. Grissell and Peto, York Road, Lambeth	3 0½	3 3½	...	3 5	3 6	4 4½	5 2	5 4½	5 7	5 7½	6 0	6 1	6 3½	6 7½	6 8½	6 10	6 10½	6 11	7 1½	7 2½	7 4½	7 6½	8 9	9 10½	11 4½	11 10	3 6	...
7. Henry H. Piper, 42, Eastcheap .	3 1	3 8	2 9½	3 8	3 10	4 11	5 11	6 0	6 8	6 8	7 0	7 1	7 1	7 7	7 10	8 1	8 1	8 1	8 4	8 4	8 7	8 11	9 10	11 9	13 4	14 4	5 0	4 3

3 *July*, 1845.

(Signed) CHARLES BARRY.

Specification of the Glass and Glazing required for the Metal Sashes and Frames in those Portions of the New Palace at Westminster which are now in progress (*July*, 1845).

EXTENT OF CONTRACT.

1st. The Contract will comprise the providing and glazing in metal frames and sashes, &c., about 27,545 feet superficial of patent plate glass, No. 2, and about 9,872 feet superficial of polished plate glass, of two or more thicknesses, in the manner hereinafter more fully described.

NATURE OF CONTRACT.

2nd. The Contractor is to find and provide, at his own cost and charges, all the glass, putty, and other materials required, and all labour, scaffolding, templates, and implements, necessary to complete the glazing of the sashes and frames in the best and most workmanlike manner; and he is to take upon himself all risk and loss (if any) of breakage from any cause arising, except from wilful damage or gross negligence of persons over whom he has no control, and, with the aforesaid exception, he is to leave the whole of the glass perfect and clean, to the satisfaction of the Architect before it shall be considered that he has completed his contract, or that he shall be entitled to the balance of moneys otherwise due to him.

SIZE AND DESCRIPTION OF THE GLASS, ETC.

3rd. The sizes and forms generally of the patent plate glass, No. 2, are shown on the drawings of the metal frames, marked Contracts (A.), (B.), (C.), and (D.), and numbered from No. 1 to No. 3 inclusive, and the sizes and forms of the polished plate glass are shown on the drawings of the metal frames marked Contract (E.), numbered No. 9, 10, 11, 12, 13. Some of the other frames may vary in a slight degree from these; but in all cases the accurate dimensions must be taken from the metal frames themselves; for which the Contractor is to provide, and be responsible.

The patent plate glass No. 2 to be used in the sashes and tracery heads, as shown by the above-mentioned drawings, is to be 1-11th of an inch thick, and is to weigh 19 ounces to the foot superficial; it is to be ground and polished to a perfectly true and brilliant surface, to be free from all colour, striæ, air-bubbles, blisters, or sand specks; it is to be cut accurately to fit the rebates of the sashes and tracery heads, cusps, &c.; the edges are to be blackened, and it is to be bedded in black putty, and secured by metal fillets being screwed down with a bed of putty on the glass, the putty to be cut off fair with the metal; and the whole to be finished and left clean and perfect.

The polished plate glass to be used in the frames and tracery heads, as shown by the aforenamed drawings (Contract E.), to be of the first quality. For the larger lights and their cusp heads, the glass is not to be less than 1-4th of an inch thick, nor more than 5-16ths of an inch thick, nor to weigh less than 3lbs. 6oz., nor more than 4lbs. 3oz. per foot superficial (except for some of the largest lights that exceed 12 feet superficial in each plate, which may be 3-8ths of an inch thick, and weigh 5lbs. to the foot superficial.) For the smaller squares, which do not exceed 3 feet 6 inches each, and for the openings in the tracery heads generally, it is to be 1-8th of an inch thick, and to weigh 1lb. 10oz. per foot superficial; the whole to be free from colour, striæ, air-bubbles, or blisters, and sand specks; to be accurately ground and polished to a perfect and brilliant surface; all excess of alkali to be guarded against in the manufacture. The squares to be cut to fit close and accurately to the metal frames; the cusp points and tracery heads and openings to be bedded in black putty, and secured by a metal fillet, bedded in putty, and screwed to the frames. The puttying to be cut off clean, and the whole to be finished and left clean and perfect. The joint between the long plate and the cusp heads of the lights at the springing is to be a ground joint, fitting perfectly close with a bedding of black putty. Any squares of either kinds of glass that give a refracted view of the edge when glazed, will be condemned as not being properly cut to the frames.

TIME, ETC.

4th. The glass that will be first required to be glazed in the sashes will be about 13,664 feet superficial of patent plate No. 2, and 2204 feet superficial of polished plate, which must be glazed in the frames of the aforenamed Contracts (A.), (B.), (C.), (D.), and (E.) before the first day of January, 1846. But the Contractor shall employ workmen from time to time, and at any times, and in such numbers, as the Architect may think necessary to glaze the sashes immediately they are finished, or finished and fixed as the case may be.

WORKMAN PROVIDED.

5th. The Contractor for the metal frames will provide a workman or workmen to unscrew and screw up the fillets, that secure the glass in the sashes; but the Contractor for the glazing will have to provide all other labour, &c., as hereinbefore specified.

MODE OF THE MEASUREMENT.

6th. The glazing will be paid for at per foot superficial, including all materials and labour complete, and the measurement is to be taken in the rebates. The tracery heads and openings to be measured as square, the largest dimensions at right angles to each other being taken as the size.

GLASS MAY BE STORED.

7th. The Contractor will be allowed to deliver into store, after it shall have been examined and approved of by persons to be appointed by the Architect, such quantities of glass as he may think proper, for which he will be allowed payments on account, as hereinafter stated, of 75*l.* per cent. on the contract value thereof, the Contractor taking upon himself the entire risk of damage whilst it is in store.

PAYMENTS.

8th. Payments to be made on account, if required, after the rate of 75*l.* per cent. on the Contract value of the glass delivered, or of the glass and workmanship, at intervals of two calendar months from the signing the Contract, and the balance due to the Contractor is to be paid to him within three calendar months from the date of the certificate of the Architect that the Contractor has satisfactorily completed his Contract in all respects.

SURETIES.

9th. The Contractor is to name parties who are willing to become sureties to the amount of one-fourth of the Contract sum for the due fulfilment of the Contract.

FORM OF THE TENDER.

10th. The tender to state as follows; viz. :—

Price of patent plate glass, No. 2, in squares, as shown, including everything specified, at per foot superficial.

Ditto, ditto, in tracery head openings, measured square.

Ditto, ditto, at per foot superficial.

Ditto, ditto, in squares of all sizes, without labour, delivered into store at per foot superficial.

Price of plate glass, including everything specified, in squares of about 1 ft. 9 in. super. in each, at per ft. super.
Ditto . . . 2 0 ditto.
Ditto . . . 3 0 ditto.
Ditto . . . 4 6 ditto.
Ditto . . . 5 3 ditto.
Ditto . . . 5 9 ditto.
Ditto . . . 6 0 ditto.
Ditto . . . 6 9 ditto.
Ditto . . . 7 0 ditto.
Ditto . . . 7 3 ditto.
Ditto . . . 8 6 ditto.
Ditto . . . 9 0 ditto.
Ditto . . . 9 3 ditto.
Ditto . . . 9 6 ditto.
Ditto . . . 10 0 ditto.
Ditto . . . 10 6 ditto.
Ditto . . . 10 10 ditto.
Ditto . . . 11 0 ditto.
Ditto . . . 11 6 ditto.
Ditto . . . 14 4 ditto.
Ditto . . . 18 0 ditto.
Ditto . . . 22 8 ditto.
Ditto . . . 24 6 ditto.

Price of plate glass, including everything specified in tracery head openings, measured square, of all sizes, at per foot superficial.

Price of the foregoing plates, delivered into store without labour, at per foot superficial.

(Signed) CHARLES BARRY.
JOHN FOORD & SONS.
24 July, 1845. Witnessed, CHARLES BARRY, jun.

METAL RAILING, HOUSE OF LORDS.

(D.)

Westminster, 9 July, 1845.

Sir,—I enclose a tender I have received from Mr. John Hardman, of Birmingham, for the metal railing required for the galleries of the New House of Lords. As Mr. Hardman's manufactory is the only one in the kingdom, where such work is properly executed, and as he has satisfied me that the profit, which he has added to the prime cost, is very reasonable, I beg to recommend that his tender should be accepted.

Alexr. Milne, Esq. I have, &c. CHARLES BARRY.
&c. &c. &c.

TENDER FOR BRASS RAILING FOR HOUSE OF LORDS.

Birmingham, 10 May, 1845.

We hereby offer to execute the Railing according to the pattern compartment sent, including packing, carriage, and delivery in London, for the sum of 33*l.*: each compartment to consist of one upright and standard for light, with three feet nine inches of lateral bars and scrollwork. JOHN HARDMAN & CO.

IRON ROOFING (FIRST CONTRACT).

(A.)

Office of Woods, &c., 21 April, 1845.

My Lords,—We beg leave to lay before your lordships the copy of a letter we have received from Mr. Barry, enclosing two tenders which he had received for iron roofs over the Victoria Hall, and the House of Commons, &c. at the New Houses of Parliament.

Mr. Barry states, that although Messrs. Grissell & Peto's tender is the highest, yet, after giving the subject much consideration, he is inclined to recommend, that it should be accepted in preference to a lower tender of Messrs. Boydell & Co., because he cannot believe that the work could be properly executed at the rate of the lowest tender; and that it is very desirable, that the work should be executed in London, not only on account of the acknowledged superiority of London over country castings, the facilities of superintendence, &c., but also to avoid the constant and vexatious delays, which, in his experience, invariably take place with respect to ironwork executed in the country; and inasmuch as Messrs. Grissell & Peto are already employed upon the building, it is advisable to retain them, in order to avoid difficulties, which might arise from the introduction of other tradesmen and workmen to the works, scaffolding, machinery, &c.; and Mr. Barry is satisfied that at the price of Messrs. Grissell & Peto's tender they could not realize a greater profit than 10 per cent. upon the prime cost, even if all the circumstances should be favourable to them during the execution of the work; and Mr. Barry states that, as he expects the walls of those portions of the buildings to be ready for the roofs in the autumn of the present year, and as the price of iron is constantly rising, it is of the greatest importance that no time should be lost in making a contract for the work in question, the cost of which, at the price of Messrs. Grissell and Peto's tender, will not exceed 8500*l.*

We have therefore to request your lordships' sanction to this arrangement, as in the present state of the iron trade it is difficult to form a correct opinion of what the future result may be.

We are, &c. LINCOLN.
A. MILNE.

The Right Honourable the Lords
Commissioners of Her Majesty's Treasury.

Westminster, 7 April, 1845.

My Lord and Gentlemen,—I forward to you enclosed two tenders, which I have received for iron roofs over the Victoria Hall and the House of Commons, &c., at the New Palace at Westminster,—one from Messrs. Grissell and Peto,* of London, and the other from Messrs. Boydell and Co.,† near Dudley.

Although the tender of Messrs. Grissell and Peto is the highest, I am induced, after giving the subject much consideration, to recommend that it should be accepted in preference to the lower tender of Messrs. Boydell and Co., on the following grounds: First. Because I cannot believe that the work could be properly executed at the rate of the lowest tender, except at a considerable loss. Secondly. Because it is very desirable that the work should be executed in London, not only on account of the acknowledged superiority of London over country castings, the facilities of superintendence, &c., but also to avoid the constant and vexatious delays that, in my experience, invariably take place with respect to ironwork executed in the country. Thirdly. Because it is desirable to employ Messrs. Grissell and Peto, inasmuch as they are already employed upon the building, in order to avoid difficulties which might arise from the introduction of other tradesmen and their workmen to the works, the use of scaffolding, machinery, &c., belonging to them, &c. Fourthly. Because I am satisfied that at the price of Messrs. Grissell and Peto's tender, they could not realize a greater profit than 10 per cent. upon the prime cost, even if all circumstances should be favourable to them during the execution of the work.

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* 21*l.* 11*s.* per ton.

† 17*l* per ton.

As the walls of other portions of the building, to which these tenders relate, will, I expect, be ready for the roofs in the autumn of the present year, and as the price of iron is constantly rising, it is of the greatest importance that no time should be lost in making a contract for the works in question, the cost of which, at the price of Messrs. Grissell and Peto's tender, would not exceed 8500*l.*

The Commissioners of Woods, &c. I have, &c. CHARLES BARRY.

IRON ROOFING (SECOND CONTRACT).

(B.)

Westminster, 9 July, 1845.

Sir,—I enclose a tender, which I have received from Messrs. Grissell and Peto for the remainder of the iron roofs now required to complete the covering in of the portion of the New Houses of Parliament now in hand. As it is based upon the same terms as their last tender for work of a similar description, with the addition only of the amount of the rise of iron, which has since taken place, I beg to recommend, for the reasons I formerly urged in favour of accepting their last tender, that their present tender should be accepted.

Alexander Milne, Esq. I have, &c. CHARLES BARRY.

(Tender referred to.)

Lambeth, 7 July, 1845.

Sir,—We beg leave to hand you prices for the following iron roofs and flats at the New Houses of Parliament, and for the girders and floor-plates of the House of Peers; viz. :—

Roofs over Peers' Refreshment-rooms and corridors, east and west of House of Peers, the public lobby and corridor connected therewith, and over Bishops' apartments and offices on the north side of Royal Court, 22*l.* 12*s.* per ton, say twenty-two pounds twelve shillings.

Roofs over low buildings round Peers' office-court and Commons' office-court, 28*l.* 5*s.* 4½*d.* per ton, say twenty-eight pounds five shillings and fourpence halfpenny.

Also for the following:—

Low buildings round Commons' court; the division lobbies east and west of the House, roof over cloisters, and flat over staircase in Speaker's house, and the roofs for Black Rod and Librarian's house, including the Librarian's dining-room, and corridor adjoining, at a price for the cast-iron of 28*l.* 0*s.* 8*d.* per ton, say twenty-eight pounds and eightpence.

And for the wrought-iron, 23*l.* 13*s.* 6*d.* per ton, say twenty-three pounds thirteen shillings and sixpence.

Cast-iron roof plates for House of Commons and Victoria Gallery, 18*l.* 10*s.* 10½*d.* per ton, say eighteen pounds ten shillings and tenpence halfpenny.

Floor-plates, &c., for House of Peers :—	*s.*	*d.*
Plates, including fixing, per cwt.	20	3
Marine metal for joint, per lb.	0	5
Thread screws, per dozen	1	1
Chipping, filing, and fitting, per plate	5	5
Holes drilled and tapped, each	0	4½
Oiling, per plate	0	10

Girders for floor of House of Lords, 11*l.* 16*s.* 6*d.* per ton, say eleven pounds sixteen shillings and sixpence, the whole fixed complete.

Charles Barry, Esq.
&c. &c. &c.

GRISSELL & PETO.

Office of Woods, &c., 14 July, 1845.

Sir,—I am, on behalf of the Commissioners of Her Majesty's Woods, &c. to acquaint you, that the Board are informed that there has been a considerable fall in the price of iron since Messrs. Grissell & Peto's last tender, and that they desire to have a revised tender submitted for the prices of the several works, together with a statement of the probable amounts of the total cost for the roofs of each portion of the building now proposed to be contracted for at the New Houses of Parliament.

Charles Barry, Esq.

I am, &c. A. MILNE.

Westminster, 18 July, 1845.

Sir,—In reply to your letter of the 14th instant, respecting the tender of Messrs. Grissell & Peto for the additional iron roofs required for the New Houses of Parliament, I beg to inform you, that their former tender for the roofs over the Royal Gallery and House of Commons, which has already been approved by the Board, was made in November, 1844, when the market price of pig-iron per ton was from 55*s.* to 60*s.*

The present market price is from 105*s.* to 110*s.* per ton, of which I have received from them the most indubitable testimony. They are therefore unwilling to make any alteration in the last tender, which, for the reasons I have stated in a former letter, I beg again to recommend should be accepted. The cost of the work included in this tender will amount to about 14,000*l.*

Alexander Milne, Esq. I have, &c. CHARLES BARRY.

Office of Woods, &c., 2 August, 1845.

Sir,—The Commissioners of Her Majesty's Woods, &c., having had under their further consideration your letters of the 9th and 18th ultimo, respecting the tender of Messrs. Grissell & Peto for the additional iron roofs now required for the New Houses of Parliament, I am, in reply, to acquaint you, that as the Board are not aware of Messrs. Grissell and Peto having submitted a tender for iron roofs in November of last year, they are apprehensive, therefore, that there may be some inaccuracy in the price of iron as stated for the period when the first tender was made, which the Board consider to be in April last, since which, as they are informed, there has been a considerable fall in the price of iron; and the Board would therefore wish to receive further information from you on these points previously to sanctioning Messrs. Grissell and Peto's tender transmitted with your letter of the 9th ultimo.

Charles Barry, Esq. I am, &c. C. GORE.
&c. &c. &c.

Westminster, 11 August, 1845.

Sir,—In reply to your letter of the 2nd instant, relative to the last tender of Messrs. Grissell and Peto for an additional portion of the iron roofs for the New Houses of Parliament, I beg to acquaint you, that the Board are perfectly correct in stating that no tender for iron roofs was submitted to them in November of last year. Nevertheless, the tender submitted on the 9th of July last is based upon the calculations made at that time, when Scotch pig-iron could be purchased in Glasgow at from 55*s.* to 60*s.* per ton; those calculations had reference to an allowance for a portion of the work executed by Messrs. Grissell and Peto under their previous Contract. Upon a further investigation, I find that I was in error in stating in my letter of the 18th ultimo that Messrs. Grissell and Peto's tender for the roofs over the Royal Gallery and House of Commons was founded upon calculations made in November: their tender for the roofs in question was based upon the price they had actually contracted to pay for the whole of the iron required to complete the work tendered for, which was purchased and delivered when the authority of the Board was obtained for the acceptance of their tender.

The Honourable Charles Gore. I am, &c. CHARLES BARRY.

PAINTING AND GILDING

(C.)

Westminster, 17 August, 1846.

Sir,—I send enclosed a tender, which I have received from Messrs. Crace for the ordinary and decorative painting and gilding, that may be required in completing the interior of the New Palace at Westminster, which, according to the terms of it, may be made to apply either to the whole, or to any part of the work required, as may hereafter be considered advisable.

The prices of the tender are in accordance with those, upon which Messrs. Crace have been already employed by the Board in executing the plain and decorative painting and gilding of the ceiling of the House of Lords; they are, in my opinion, fair and reasonable, and the tender might with propriety be accepted. As a further portion of such works is required to be executed immediately in completing the decorations of the House of Lords, the Victoria Hall, and Public Lobby, &c., with a view to the occupation of the New House of Lords in the next session of Parliament, I shall be glad to be favoured with the instructions of the Board on the subject at its earliest convenience.

Alexander Milne, Esq. I have, &c. CHARLES BARRY.

(Tender referred to.)

14, Wigmore-street, 1 August, 1846.

Sir,—We are willing to undertake any portion of the plain and decorative painting and gilding that may be required at the New Palace at Westminster, to execute the work to your entire satisfaction at the under-mentioned prices:—

For plain painting, at the rate of 10 per cent. below the official list of the Department of Woods and Works.

For gilding and decorations at the under-mentioned scale of prices:—

	Plain Gilding.			Carved, Solid, or Etched.	
	s.	*d.*		*s.*	*d.*
Per foot superficial	3	6	...	5	6
Per foot run.:					
Mouldings, ⅜ girth	0	2½	...	0	3½
" ½ "	0	3	...	0	4½
" ⅝ "	0	3½	...	0	5
" ¾ "	0	3¾	...	0	6
" ⅞ "	0	4¼	...	0	6½
" 1 inch	0	4½	...	0	7
" 1⅛ "	0	5	...	0	7½
" 1¼ "	0	5¼	...	0	8
" 1⅜ "	0	5¾	...	0	9
" 1½ "	0	6	...	0	10
" 1¾ "	0	7	...	0	11½
" 1⅞ "	0	7½	...	1	0½
" 2 "	0	8	...	1	1
" 2¼ "	0	8¾	...	1	2½
" 2½ "	0	9½	...	1	4
" 2⅝ "	0	10	...	1	5
" 2¾ "	0	10½	...	1	5½
" 3 "	0	11½	...	1	7
" 3¼ "	1	0½	...	1	8½
" 3½ "	1	1½	...	1	10
" 3¾ "	1	2½	...	1	11½
" 4 "	1	3½	...	2	1
" 4½ "	1	5½	...	2	4
" 5 "	1	8	...	2	7
" 5½ "	1	10	...	2	10
" 6 "	2	0	...	3	0

	s.	*d.*	
For superior artists' time, at	21	0	per diem.
For artists at	12	0	"
For painters	5	5	"
Prepared paint, common colour	0	6	per lb.
Prepared oil	1	0	per quart.
Oil of turpentine	1	5	"
For gilders	6	6	per diem.
Gold	1	10	per book.

Charles Barry, Esq.
&c. &c. &c.

We are, &c.

FREDERICK CRACE & SON.

Office of Woods, &c., 24 August, 1846.

Sir,—The Commissioners of Her Majesty's Woods, &c., have had under their further consideration your letter of the 17th inst., transmitting tender from Messrs. Crace of prices, at which they would be willing to undertake any portion of the ordinary and decorative painting and gilding, that may be required in completing the interior of the New Houses of Parliament; but previously to deciding upon their offer, I have to request your opinion whether some of these works, especially the gilding, would not admit of being submitted to competition amongst tradesmen, whose respectability is known to the Board, and that you will at the same time state, whether you have any objection to offer to such a course of proceeding.

Charles Barry, Esq. I am, &c. A. MILNE.

Westminster, 25 August, 1846.

Sir,—In reply to your letter of yesterday's date, relative to Messrs. Crace's tender for the ordinary and decorative painting and gilding at the New Houses of Parliament, I beg to acquaint you, that the three branches of work therein referred to are so intimately mixed with and dependent on each other, that it would, in my opinion, be attended with much practical inconvenience and many injurious results to employ more than one tradesman upon them. With reference to Messrs. Crace, I have to state, in addition to the reasons, which I have already given for recommending their employment, that, from the experience I have had of them as tradesmen, I have the greatest faith in their artistic skill to carry out my views in the most effective and workmanlike manner.

Alexander Milne, Esq. I have, &c. CHARLES BARRY.

Office of Woods, &c., 3 September, 1846.

Sir,—I am, on behalf of the Commissioners of Her Majesty's Woods, &c., to acknowledge the receipt of your letter of the 25th ult., explaining the grounds, upon which you consider it would be inexpedient to submit to competition the works for the ordinary and decorative painting and gilding at the New Houses of Parliament; and I have, in consequence of your recommendation, to convey to you the Board's authority to accept Messrs. Crace's tender for the works in question, which you submitted to this Board with your previous letter of the 17th ultimo.

Charles Barry, Esq. I am, &c. C. GORE.

The New Palace of Westminster.

The following observations, in conclusion, are extracted from a descriptive and very useful pamphlet, published by WARRINGTON and Co., Strand, with the title as above.

"In 1840, the river wall, commenced in 1837, having been erected in Aberdeen granite, and some other necessary foundations made, the first stone of the superstructure, forming the south-east angle of the plinth of the Speaker's house, was laid on the 27th of April, but without any public ceremony."

"The New Palace of Westminster occupies an area of about 8 acres, has 4 principal fronts, the eastern one being that towards the river; it contains within its area no less than 11 quadrangles or courts for the admission of light and air to the numberless rooms, residences, and offices, besides the two Houses and their adjuncts. There are 500 rooms, of all kinds, with separate residences (some of them of large size), for 18 different officers of the Houses of Lords and Commons; the principal of these are residences for the Speaker of the House of Commons, the Serjeant-at-Arms, the Librarian of the House of Commons, and the Librarian and Usher of the Black Rod of the House of Lords. There is also a chapel formed in St. Stephen's crypt for the use of the residents in the building."

"The river or east front is in all 940 feet in length; the projecting portions in wings at the extremities are each 120 feet in length, leaving between them a fine paved terrace, overlooking the water, 700 feet long and 33 feet wide. This façade consists of five portions—the centre, which has three stories above the ground floor, and the north and south curtains, which each have two stories only above that level; while the wing towers are the most lofty portions."

"The roofs of the entire building are of iron framing, involving in many parts most interesting and peculiar construction, and the covering plates are also iron, galvanized to protect them from rust."

"The north and west fronts have bays and buttresses similar in disposition to those of the river front, and the strings, windows, &c. range therewith."

"The Victoria Tower is the largest and highest square tower in the world, being 75 feet square and 336 feet high to the top of the pinnacles, and above 400 feet to top of flagstaff, intended (when the Sovereign is within the walls) to bear a Royal Standard of unusual dimensions. Its foundation is made of solid concrete 9 feet 6 inches in depth, with solid brickwork over that, the whole enclosed and strengthened by piling. The lower part, which is entered by a gigantic archway to the west, fifty feet high, is appropriated to the sole use of the Sovereign, who, when opening or proroguing Parliament, always enters here, the Royal carriage being driven under the Tower to the foot of the Royal staircase within the Tower."

"The whole of the interior of the Tower, above the groining over the entrance, is to be fitted up with numerous fire-proof floors to receive Parliamentary records and documents; the lowest of these floors being fitted as a sorting room, from whence a circular staircase leads to the several rooms in each floor."

"The Clock Tower is situated at the north-west angle of the building in the New Palace Yard. The plan is square, and its altitude is not far short of that of the Victoria Tower, being 316 feet from high water mark (Trinity standard) to the top of the sceptre on its roof; but its design is totally dissimilar; its walls are panelled and buttressed delicately, yet with simplicity; the richest part of its design being in and above the stage of the great clock, with the beautiful lantern spire which surmounts the whole. The clock itself is of course the chief feature in the composition, and has a dial 23 feet 6 inches in diameter, the largest in the world."

"The Central Tower is different in design from either of the foregoing, containing the largest octagon gothic vault known where a centre pillar is not used, as is the case in most of the larger chapter houses of our cathedral cities. The tower is entirely occupied in the lower part by the central hall; above its stone vault rises a great cone of brick, faced with stone, which carries the light and beautiful open lantern, rising far above the roofs; this portion of the tower is used as the air-shaft or outlet for the ventilation of the whole of the great building, converting a necessary and not usually ornamental appendage into a most original and attractive feature."

"The New Palace of Westminster has, at last, removed the reproach so long cast on us by foreigners, that ours, the richest and largest city in the world, had no public building of magnificence or originality to be compared with those of the capital cities of our continental neighbours."